Read Reports of Ohio and Pennsyluania Sheet Metal Contractors' Conventions in This Issue.

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AMERICAN ARTISAN and Hardware Record

Vol. 88. No. 4. 620 SOUTH MICHIGAN AVENUE, CHICAGO, JULY 26, 1924. $2.00 Per Year

A Feature the Prospect Can *See* and *Understand*

The MUELLER Zone of EXTRA Heating Capacity

YOU can *see* the extra direct heating surface in the Mueller Double Radiator Furnace — and your customers will readily understand its greater heating and fuel-saving value; will pay more to get it.

No other warm air furnace has any feature that can compare with "the Mueller Zone of EXTRA Heating Capacity." It gives the Mueller Double Radiator Furnace more square feet of direct heating surface than any other furnace of equal size fire pot.

On a basis of cost per square foot of direct heating surface, this is the lowest-priced warm air furnace on the market!

Because of these facts, plus Mueller sales and engineering co-operation, the Mueller line is the most profitable for you to handle—*easier to sell than to sell against!* Which are you doing?

Immediate Service *available for all dealers on Mueller Registers and Fittings. Make up your fall requirements NOW.*

L. J. MUELLER FURNACE CO.

Makers of Warm Air, Steam, Vapor, and Hot Water Heating Systems, Registers, Pipe and Fittings

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MUELLER FURNACES

easier to sell than to sell against

Founded 1880 by Daniel Stern

Published to Serve the Warm Air Furnace Sheet Metal, Stove and Hardware Interests

AMERICAN ARTISAN and Hardware Record

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THE CIRCULATION OF IDEAS

MAKING MEN proud of their work never cuts production or diminishes quality. But constant drain of their sense of fulfillment does that very thing.

YOU HAVE ONE excellent way to make your superintendent or your foreman or one or a group of your workmen proud of their work. The way is this:

SUPPOSE in your organization there has been solved one of the constant problems that always accompany construction. The problem may be nothing more than some new way of placing a machine so that production is increased. Or the problem may have been the expeditious repair of equipment. One hundred and one thousand possibilities present themselves.

NOW IF YOU will write the occurrence in a letter to the editor of AMERICAN ARTISAN AND HARDWARE RECORD and send a picture if possible, the event can be given publicity. It will be interesting to other contractors and their forces, and it will create a spirit in your own organization that will help wonderfully in getting results.

ALPHABETICAL INDEX AND CLASSIFIED LIST OF ADVERTISERS, Pages 52-54-56.

THE SUPER-SMOKELESS FURNACE

Burns Smoke as Fuel!

SUPER-SMOKELESS Furnaces burn the cheaper grades of soft coal not only without smoke but with great efficiency. Smoke and soot are burned as valuable fuel of exceptional heating value. SUPER-SMOKELESS Furnaces are cleaner, require less coal, and generate more heat than other furnaces of equal size firepot.

SUPER-SMOKELESS Furnaces are more than satisfactory from the standpoint of the user. They are recommended by home owners to their friends, and the demand grows with every installation. Thousands are already in use in all soft coal sections, giving splendid satisfaction. Satisfied customers are a contractor's most valuable advertisement, and bring increased sales and bigger business—and a SUPER-SMOKELESS sale means a satisfied customer.

SUPER-SMOKELESS Furnaces are quickly and easily erected. They are distributed through exclusive dealers, and offer a wonderful business-building proposition. It will pay YOU to become a SUPER-SMOKELESS dealer. Send for complete data and special dealer proposition.

SUPER-SMOKELESS Pipe Furnace

UTICA HEATER COMPANY, UTICA, N. Y.

218-220 West Kinzie Street, CHICAGO, ILL.

THE SUPER-SMOKELESS FURNACE

This Editorial Was Written by Paul Brandstedt—It Is a Good One.

Editorial of the Week

THE editor had an easy job this week. He was attending the convention of the Ohio Sheet Metal Contractors and he did not have to write an editorial for this week's issue.

It was written for him by a man who did not know that he was doing another man's job, and probably the editorial is just that much better for that very reason.

The man who wrote the editorial is Paul F. Brandstedt, former President of the National Association of Sheet Metal Contractors and now the Chairman of its Trade Development Committee.

Mr. Brandstedt read the editorial which we published in our June 28th issue, in which we spoke of the three great words, "Work, Serve and Share," and he wrote the following letter to us:

"To American Artisan:

"I read your editorial in the June 28th issue.

"It covers the ground and when you pointed out the things that were here done in that disinterested way for the good of the many, as you did in your article, I hope lots of men will read and ponder.

"So many men have added their bit to the great progress made; men who have been forgotten; men who have walked down the great highway of time and are lost in the vast past; men who never will be given credit for their little grain of help that has ultimately built the structure of today, and whom but few of today's crowd know. Let us not forget this man, or these men.

"The work then was harder than it is now, which is quite natural. They were sowing, you are reaping. And the grain?

"After all, Pedersen, the one great matter behind it all is 'Unselfish Giving.' The man that can give without stint of all else than money is to my mind the greatest constructive force in this vast world full of forces working for progress and constantly evolving better and greater things.

"Those, my dear sir, are the thoughts that underly the constructive aims of a Trade Association that, like ours, has a purpose and an heritage.

"My respects and regards,

"Cordially yours,

"PAUL F. BRANDSTEDT."

Many an editor might cudgel his brains for hours and produce a collection of words which would not say half of what Mr. Brandstedt said in his letter, and we shall not attempt to paint the lily.

Random Notes and Sketches.

By Sidney Arnold

Bill Angermyer, the hustling Pittsburgh sheet metal contractor and secretary of the state association of that craft, sent me a copy of one of those photos that fellows had taken in the old days when rye bread and Schlitz were in good style and when they had had just enough of both to feel good natured even with the "flash" shooting off in their faces.

To the left is Louis Luckhardt; the man with the glasses, in the

Although This Picture Was Taken Before Volstead Was Heard of They Are All Sober.

center of those standing, is the late J. D. Riley whom many will remember as one of the old-timers in the National Association.

"Bill" is on the right, and the smiling gent with the heavy "soup strainer" is none other than our now rejuvenated Paul F. Brandtstedt. He wasn't the proud father of Miss Jeannette at that time, or his moustache would have been much smaller in this picture. It is not a Pittsburgh stogie that Paul is holding in his right hand.

* * *

Some "salesmen" (excuse the use of this word) are so lacking in "terminal facilities" that they lose sales as often as a fly will light in a bowl of sugar.

This effusion is occasioned by the following story sent to me by Louis Kuehn of the Milwaukee Corrugating Company:

He was selling meat-slicing machines and his first canvass was a Dutch butcher. He started right off with a demonstration, slicing diligently at the slab of bacon until it all had been cut. Then he turned to the butcher and asked: "What do you think of 'er? Some machine, eh?"

The butcher, eyes shining and his face wreathed in smiles, slapped his hands approvingly and said: "Py gollies! Dot's fine! Dot's a great t'ing. Effry butcher in dis town should have vun."

Then elapsed a period during which neither spoke. The salesman placed another slab of bacon in the machine and repeated the demonstration. Then he turned again to the butcher.

"Don't you think that's a time-saver—a real investment?"

"Sure! Dot's de stuff, all right."

"You think it's a good thing for you?"

"Sure! Dot's de perries."

"You know you need it, don't you?"

"Sure! I shoud say so."

"Well, why don't you buy it?"

"Vell, vy don'd you ask me?"

* * *

E. C. Fox, the Independent register man, is, as many of you know, one of the fellows who looks after the physical well being during the Cleveland meetings of the National Warm Air Heating and Ventilating Association and he shows excellent judgment in everything pertaining thereto, such as, for instance, having mashed potatoes if green peas are to be served as a side dish.

Anyway, he has other good ideas, such as this, that a long face never draws business and that an optimist (within reason) in the long run will be more prosperous and better liked than the chronic fault-finder and pessimist.

* * *

A couple of days ago I received a "snap shot" showing H. D. Cowles and his better half as they were getting ready to go out to the picnic of the Iowa Sheet Metal Contractors. They are standing in front of their automobile in which my correspond-

Mr. and Mrs. Cowles.

ent said they were to spend nine months, touring all over the United States.

What I would like to know is, what that automobile is made of, for it seems to me that they look much bigger than the car.

* * *

Charles F. Hauck, who runs a successful hardware, stove and sheet metal business in Springfield, Ohio, was asked the other day to give the chief reason for his success.

"Well," said Charlie, "I always made it a point if I knew the women were crazy to buy cut glass not to stock up my store with mouse traps and try to sell them those instead."

* * *

The errand boy rushed into the office of the Chicago Furnace Supply Company boss with his hat on one side of his head and shouted. "Hey, Mr. Lorenz! I want to get off to go to the ball game."

"William," said Mr. Lorenz, "that is no way to ask. Sit here at the desk and I will show you how."

He went from the room and returned with his hat in his hand saying, "Please, Mr. Lorenz, may I go to the ball game this afternoon?"

"Sure," said Billy; "here is 50 cents for a ticket."

This Is the Story About How Roy Beat the Bulldog Man and Got His Goat.

Roy Foedisch Found Out What the Bulldog Furnace Really Was, and Then It Was Easy to Sell a Utica.

ONCE more we have the Bulldog Universal pipeless "furnace" with us again, and lest we might forget to state, the same "poor proofreading" in its catalog has not been "corrected." The so-called radiator is still made of "copper, steel-alloy," and the same clumsy attempt to lead the ignorant reader to a conclusion which is not in strict conformance with facts is still in the text, as noted in the following paragraph:

Does Copper Conduct the Heat?

"Take two pieces of wire the same length—one of copper and one of iron. Put one end of each in the fire and see which one you'll drop first! That shows one reason why we make our Heat-Ray radiator of copper-steel alloy. After we've trapped the heat of the fire, we conduct it to the air immediately. It is estimated this material will conduct the heat more than twice as fast as cast iron. So you see why the Bulldog gives such quick results. You get all the good of your fuel and you get it instantly."

And here is the same "clever" description of the "Gable-top radiator":

"Gable-top radiator — exclusive feature of the Bulldog—gas-tight and economically welded construction of copper, steel-alloy—durable and of great heat conductivity. The gable top shape presents the greatest amount of surfaces to the direct rays of the fire. All shine surfaces. Absolutely no dark, inefficient surfaces. Self cleaning. No accumulation of soot. The gable-top radiator with its large clean 'shine' surfaces following the stream lines of the air gives the greatest possible heating efficiency."

Note particularly the comma after copper in the fourth line of the paragraph quoted. Of course, it may have slipped in by a mistake of the printer, or it may have been placed there by an advertising writer who was not any too well posted on the rules of punctuation, and it may have been "passed" by the proofreader who "goes by copy."

But the fact remains that the impression has gone out among people who have received the catalog describing this contraption that the radiator is made of copper.

And the suspicion comes to us that there is some one who is very careless in the advertising office of this mail order house, for the same paragraph—word for word—is used in a large "broadside" on which there are also several of the patent medicine type "testimonials," for otherwise that comma would certainly have been deleted and a hyphen substituted.

A few days ago, one of our subscribers 'phoned us, asking if we knew who made the Bulldog furnace, and we told him that we did not know that anybody actually "made" it, as the castings were bought in one place, the registers in another and the so-called "copper, steel-alloy" fire box and radiator put together in a third place; also that Babson Brothers, a third or fourth rate mail order house, was selling it.

Our subscriber further informed us that one of his prospects had told him that the manufacturers of the "Bulldog" guaranteed that it would heat a house all winter with only two tons of coal.

We took the trouble to obtain copies of the catalog and "broadside," which is being used by Babson Brothers to sell this contraption and secured from our subscriber statements as to what recipients of this advertising matter were led to believe.

When it came down to brass tacks, however, the representative of Babson Brothers, who talked with an investigator, refused to let himself be pinned down to anything definite in the matter of guarantee of satisfactory performance, his "alibi" being in each case that the "satisfaction" depended "naturally" on the manner of firing and the kind of coal used.

Our subscriber had the satisfaction of selling this "Bulldog" prospect a Utica super-smokeless furnace, instead of the poor makeshift that the mail order house was attempting to induce her to buy, and all he had to do was to show her an installation made by him last year. The woman in that house actually did the selling for him.

Keep this point in mind, however, this subscriber of ours—Charles O. Foedisch & Son, 4910 West Erie Street, Chicago—posted himself on all the facts. He found out what the proposition was that he had to compete against, and when he had the facts he used plain, every day, common sense in his selling tactics. He did not go up in the air. He did not complain about unprincipled competition. He did not say that he could not meet the price. He knew that he was selling a good furnace at a fair price, and he talked and showed his own furnace, calling attention only in an off-hand manner to the obviously wild claims of the mail order house, and as a result the prospect practically sold herself.

Wants Repairs for "Improved Air Tight" Furnace.

To AMERICAN ARTISAN:

Where can I get repairs for a horizontal brick set furnace? The only name on the furnace is "Improved Air Tight." No manufacturer's name or other identification mark appear.

Yours very truly,
A. C. PRESLEY.

Thomas Can't Keep House Without AMERICAN ARTISAN.

J. M. Thomas, who makes his headquarters at Creston, Iowa, when he is not out selling warm air furnaces, is known as "Joe," and it is by his own request, for his business

cards read, "Call Me Joe." Anyway, Joe says that he just can't keep house without AMERICAN ARTISAN and he gives up his own good money for it, too, as you will see from the following letter:

To AMERICAN ARTISAN:

Your letter of July 8th sure has given me a good chance to get rid of you for many months. I am enclosing my personal check in payment of your fine magazine until July 1, 1926.

I am one salesman who can't complain about business. Pass it along. It might help others.

Hoping that you are growing and that I will be able to read a great many more of your good articles, I am as ever,

Yours truly,
J. M. THOMAS.

P. S.: I just can't keep house without AMERICAN ARTISAN.

Holland Furnaces Are Not Made in Union Shop, Says International Molders' Union.

Holland Agents Are Said to Make Claim That Company Has Friendly Understanding With Union.

WITHOUT comments we publish the following statement which appeared in the July issue of *International Molders' Journal*, the official organ of the International Molders' Union:

The Holland Furnace Company.

Apparently many of the agencies selling the Holland furnace are not aware of the Holland Furnace Company's attitude toward the International Molders' Union. Reports have been received from many cities stating that the agents for the Holland Furnace Company, in their effort to sell the Holland furnace, make the claim that the company has an agreement with the Molders' Union.

Recently a trade-unionist negotiated for five Holland furnaces with a local agent. When the question of the firm's attitude toward the Molders' Union was raised, before the sale had been completed, the agent assured the trade-unionist that he would show him a copy of the agreement which the Holland Furnace Company had with the International Molders' Union. The agent seemed to be so sincere in his belief that he could secure a copy of such an agreement that it was most difficult to convince him that no such agreement existed.

It is quite evident that one of the selling points which the agents for the Holland Furnace Company make is that the company is friendly to organized labor and has agreements with the men in the various departments of its plants. The Holland Furnace Company, unless it has entered into some agreement within the last few weeks, has not entered into a written agreement with any union.

It has a verbal understanding with the Sheet Metal Workers' Union, and one of its sheet metal shops is thoroughly organized. Some of its agencies employ none but members of the Sheet Metal Workers' Union. It may not be difficult to understand the reasons why the Holland Furnace Company desires to have the good will of the Sheet Metal Workers' Union. The members of that organization are affiliated with the building trades. They also install the furnaces in the homes and other buildings, and the Holland Furnace Company is probably well aware that if it had a dispute with one of the building trades it would very materially injure its business. With the producing end, the making of the castings which compose the furnace, the company has an entirely different policy; one of aggressive hostility toward trade unions.

There are a very large number of furnaces where the castings are made in union shops, the owners of which carry out the provisions which are provided for in the agreements they enter into with the International Molders' Union. The buying public is entitled to know that these furnaces can be secured in their own home town. They also are entitled to know that the statement which the Holland Furnace Company's agents make, that the company has friendly relations with the International Molders' Union, is a statement which is directly contrary to the facts. Wherever the Holland Furnace Company's agents sell a furnace upon the claim that it is made by union labor only, they are selling their furnace upon misrepresentation.

New Handy Furnace Estimating Book Full of Valuable Installer Data.

No chain is stronger than its weakest link, and no furnace is better than its installation. This furnace manufacturers who are doing successful business are appreciating to a greater extent daily. No longer are these men content to turn out a good furnace, only to permit their handiwork to be ruined by a poor installation. Their endeavor now is to educate the installer properly and to simplify the work of installing the furnace to a degree which will insure not only satisfactory service, but the best service the equipment is capable of producing. That is their aim.

The F. Meyer & Brother Company, Peoria, Illinois, has put out a new pamphlet called the Handy Furnace Estimating Book No. 44, which gives complete tabulated costs on furnace installations. It also can be used as a guide by the installer in his work.

The book is 4½x8 inches over all and has 95 pages devoted, as stated heretofore, to price lists of materials and installations, together with other data valuable to the sheet metal contractor and furnace installer.

If you have not received a copy, write for one, it will be well worth your while.

Every generation laughs at the old fashions, but follows religiously the new.

Taylor of Utica Heater Suggests Installation Changes to Correct L. H. K.'s Problem.

A letter by L. R. Taylor of the International Heater Company, Utica, New York, explains the source of trouble encountered by L. H. K. in AMERICAN ARTISAN for July 19, page 18.

Mr. Taylor's letter follows:

To AMERICAN ARTISAN:

L. H. K.'s problem has been checked over carefully by our engineering department.

It is our understanding that the floor joists run in the proper direction and are at least 10 inches deep, and that there is no register in the bedroom of this plan.

You say the basement is quite warm, while the rooms above are not comfortable. According to recognized practice one 14-inch basement pipe is not sufficient to heat the living room and the dining room.

Again, the 9-inch pipe to the bathroom or No. 2 bedroom, unless particularly well piped will not operate anywhere near capacity, nor do we believe the 14-inch pipe to the kitchen operates properly at all times.

Our suggestion would be that you allow the living room register to remain where it is, using the entire 14-inch pipe in the living room register, and install another 12-inch pipe into the dining room.

This is based with the provision that no heat at all is desired in the No. 1 bedroom.

On the bathroom or No. 2 bedroom pipe we would so arrange it that it rises abruptly at least 12 inches to 18 inches and then it carries with as much more pitch as possible to the bathroom or No. 2 bedroom, the idea being that the abrupt rise at the heater itself will tend to establish circulation early and even with a mild fire.

Our belief is the reason why your basement has been warm and the upstairs uncomfortable is that the capacity of the heater is such that it is far greater than the inches of air you have taken from it, and in view of the supply to living room and dining room being too small the heater has been forced in an attempt to heat these two rooms which naturally would result in too high a temperature in the bonnet with a correspondingly high basement temperature.

It is quite possible that the kitchen has heated satisfactorily; if it has not, move the register from the outside wall to the inside wall, or a point nearer the heater itself.

International Heater Company,
L. R. TAYLOR,
Assistant Sales Manager.

Fallacy of Air Change Factor in Figuring Heating Requirements.

Alfred M. Lane Discusses Methods of Estimating Air Leakage and Gives Reasons for His Views.

ALFRED M. LANE, president of Monarch Metal Products Company, St. Louis, Missouri, manufacturers of interlocking metal weather strips, in the following article discusses in a very clear and interesting manner what he terms the fallacies of the theory of air change factors with regard to heating requirements:

Mr. Lane's Paper.

The heating business of today owes its success to the salesmanship of the early days, more than it does to science. The more successful a salesman was in selling heating plants, the more successful the designers became through the school of experience. It was common knowledge that heat had to be applied to a substance to raise the temperature. Everybody knew that the outside walls or the window glass were colder than the air that surrounded them. The amount of "cold" (using the terminology of those days) that was transmitted through a unit of wall or glass was unknown (and, for that matter, up to quite recently was still unknown), but it was easier to reason out some factors upon which to base calculations. After these factors were determined and, for the time being, accepted, another factor became apparent and that was the heat loss due to air leakage. It was about this time that the misnomer "air change" was adopted. What was really meant was air replacement or air diffusion. In the vernacular of today, it meant infiltration.

On account of the high ceilings, the large rooms and the few windows which were formerly standard practice, it was assumed that the temperature of the air in the room would be changed to the temperature of the air outside a certain number of times per hour, due to the displacement of the warm air by the cold air. Therefore, sufficient heat had to be supplied to resist this change of temperature by the same process of experimenting that led to the acceptance of heat losses through walls and glass. The number of so-called air changes was increased or decreased to meet the various conditions.

This theory of computing heat losses by air change is responsible for lack of knowledge of the effect of air temperature change on the size of the heating apparatus. If our forefathers had christened the air factor "infiltration," instead of "air change," it is logical to believe that we would have known at least as much about heat losses due to air infiltration as we do about heat losses through wall and glass.

How Modern Construction Modified "Air Change" Factors.

Then times began to change. Buildings were made more practical; the value of light was more appreciated, building materials were being standardized and, consequently, our high ceilings were lowered and the size of the rooms was reduced. Therefore, the cubical contents of the rooms were materially decreased.

In the meantime, however, more windows were added, and for each unit of cubic contents reduction, there was a corresponding increase

of infiltration, due to the increase in the number of windows; but the engineer did not change his old-time factor and probably would have continued to guess at his radiation, if it had not been for an enterprising American institution of international reputation which demanded of its architects and engineers, the reason for the failure of a heating plant designed by an exceptionally capable and well-informed engineer under the direction of an equally capable architect. This led to the first, real scientific investigation of infiltration around windows and doors which was conducted by Messrs. Voorhees and Meyer. The result of this investigation was published in the Transactions of the American Society of Heating and Ventilating Engineers in 1916.

The facts brought out in this test were sufficient to prove that a large majority of heating plants in modern structures of the office building type, must be taxed to their capacity to get the amount of heat necessary to provide warmth and comfort. From that day up to the present time, there has been an insistent demand for more accurate information on infiltration. Recognizing this demand, the Structural Service Committee of the American Institute of Architects, by agreement with the Research Bureau of the American Society of Heating and Ventilating Engineers, undertook a series of investigations, under a code submitted by the Structural Service Committee of the American Institute of Architects. The report of these investigations was made in a paper on "Air Leakage Through the Openings in Buildings," by Messrs. Houghten and Schrader, presented at the annual meeting of the American Society of Heating and Ventilating Engineers in New York in January, 1924.

If there is any value in research at all, the results brought out in this test should be conclusive evidence of the fallacy of determining radiation on anything but known factors.

Preparation of Testing Code.

To conduct a test that would be acceptable and upon which all subsequent investigation should be based, it was necessary to prepare a code covering: (a) the method of testing and (b) the construction of the sash and frame to be tested. It was a comparatively easy matter to determine on a method of testing, as this only involved the discharge of air against the sash and frame at various velocities, employing accepted accurate instruments for measuring the volume and velocities.

The conditions of the window sash and frames, however, were not so easily determined. In the first place, it was necessary to ascertain from reliable sources what was the commercial practice for allowances in the run-way of the frames to permit easy operation of the sash. In other words, how much variation was there between the thickness of the sash and the width of the runway between stops and parting bead. In the second place, it was necessary to determine the degree of shrinkage over a period of years.

Minimum Crack Determined from Experience of Twenty Mills.

A cross-section detailed drawing through the side rail and box of a double-hung window was made and sent to twenty leading mills in different localities throughout the country, with the request that they fill in the dimensions. The replies of these mills point to the fact that the minimum clearance is 1-16 inch. Therefore, by this general mill practice, a minimum crack of 1-16 inch was established before any shrinkage took place.

The report of Messrs. Houghten and Schrader gives the leakage through this size crack at a wind velocity of 14.4 miles, as 46 cubic feet of air per minute for the whole window, or 151.8 cubic feet of air per lineal foot of crack per hour.

How Degree of Shrinkage Was Determined.

The next question was to determine the degree of shrinkage. This was done by sending the same drawings furnished to the planing mills, to twenty universities where actual measurements of windows were taken. Sixteen windows in all were measured—four each on the north, east, south and west sides. The time the windows had been in place was also given. This time varied from 5 to 30 years. The minimum difference was 3-32 inch and the maximum was 5-32 inch.

Clearance Generally Allowed in Fitting Sash to Frame.

The next stép was to ascertain the clearance allowed by the average skilled mechanic in fitting the sash to the frame. In other words, to find out what was the common practice in the trade for fitting a sash. Upon investigation, it was found that because a frame was set up first and the brick work laid around it, the frame absorbed considerable moisture from the mortar and also from being exposed to the elements. This caused considerable swelling in the frame itself; the vertical members bowing in at the center in some cases as much ⅛ inch on each side. When it came to fitting the sash to a frame in this condition, it was necessary to dress the sash down so that it would pass the narrowest point, which was at the center of the frame. The mechanic would leave a clearance of 1-16 inch on each side.

Specifications of Testing Code.

From these data, a code describing the dimensions of a crack was prepared as follows:

"Double hung window cracks will be accepted as standard with a minimum of 1-16 inch and a maximum of ¼ inch on each side between the sash and pulley stile of frame; cracks between sash and guide members (inside stops, parting bead and blind stops) shall be accepted as standard with a minimum crack of 1-32 inch on each side of sash and a maximum of 3-32 inch on each side of the sash. The cracks between frame and sash at head and sill shall be a minimum of ⅛ inch and a maximum of ¼ inch.

"Casements—minimum on hinge side ⅛ inch, maximum ¼ inch. Meeting rail, head and sill, minimum 1-16 inch maximum ⅜ inch.

"Doors — minimum crack on hinge side, ⅛ inch, maximum ¼ inch. Same at head. Lock side, minimum ⅛ inch at outside corner,

maximum 3/8 inch. Sill, maximum 1/4 inch.

"(Minimum cracks on the hinge side of all hinged openings is established to prevent hinge binding)."

Cracks duplicating the cracks due to normal and natural conditions were created by dressing down the edges of the sash and adjusting the stops away from the faces of the sash, beginning with a minimum of 1-16 inch and a maximum of 1/4 inch crack between the edges of the sash and the frame and a minimum crack of 1-32 inch and a maximum of 5-64 inch between the faces of each of the stops. Tests were then made at various velocities ranging from 5 to 50 miles per hour.

Summary of Test Results.

Using a window having identical cracks, a rib or tongue-type of weather strip was applied. This type of strip is nothing more than a tongue or rib attached to the frame and projecting into a groove plowed into the edge of the sash. The results of this test showed a remarkable reduction in infiltration for the smallest size crack; but as the crack was increased to represent shrinkage, there was a very marked increase in infiltration, proving that the effect of the strip depended on the tightness of the sash and not on the strip itself. The reason for this is that there was no provision for contact between the sash and the strip during the process of shrinkage.

After the test on the rib strip was completed, an interlocking two-member adjustable strip, of the Monarch type, was applied. The results showed that the leakage through the maximum crack of 1/4 inch was three-sevenths greater than the leakage through the 1-16 inch crack, while with the rib strip the leakage through the 1/4-inch crack was just twice the leakage through the 1-16-inch crack.

A Typical Case of the Varying Results Obtained by Figuring on the "Air Change" Basis.

To illustrate the foregoing argument on the use of the "air change" basis in figuring radiation, let us assume a room with only one window of standard size, 3 feet by 6 feet. The crack perimeter would be 21 lineal feet, and with the infiltration at 151.8 cubic feet, the total leakage would be 3,188 cubic feet per hour. To figure on a displacement of air two times per hour, and assuming the height of the room to be 9 feet, the minimum size room would have to be 15 feet by 16 feet. If this same room should have two windows, it would have to be 24 feet by 30 feet, in order to get the same displacement.

The point is this—that the cubical contents factor is relative to the crack perimeter. By the use of suitable weather stripping, the ratio of cubical contents to the crack perimeter can be reduced from 72 per cent to over 81 per cent.

Providing for Changes in Wind Direction.

It is manifest that the consumption of fuel cannot be based on infiltration, because infiltration is dependent on the direction of the wind and its velocity. Therefore, not more than 50 per cent of a building will be exposed to infiltration through windows at a given time. The windows in the building on the opposite side from which the wind is blowing, would not be subject to infiltration. From the standpoint of consuming fuel to heat the air that leaks in, there would be none. However, the wind does not always blow from the same direction and as radiation cannot be changed from one side of a building to the other, when the wind changes, it would be necessary to figure the radiation on all four sides of the building in order to provide for heat losses due to infiltration.

Once the radiation is determined, it is an easy matter to calculate the amount of fuel necessary to keep the radiation at the proper temperature. Consequently, the economy of fuel consumption must be based on the economy of radiation installation.

In conclusion, the author wishes to urge upon the heating and ventilating engineering profession in particular, from the standpoint of figuring radiation; and upon the architects from the standpoint of the economical operation of a heating plant, to abolish all references to "air change" because air is a combination of elements and therefore not subject to change except as to its state.

Haynes-Langenberg, St. Louis, Changes Name to Langenberg Manufacturing Company.

At a recent meeting of the board of directors of the Haynes-Langenberg Manufacturing Company, 4519 Euclid Avenue, St. Louis, it was voted to change the corporate name to the Langenberg Manufacturing Company.

The men named hereinafter are actively associated with the company and have been appointed as officers by the directors:

President—George F. Langenberg.

Vice-President—Everett B. Langenberg.

Secretary—John J. Walsh.

Treasurer—George L. Kleeber.

The firm is the manufacturer of the well known Front Rank furnaces and it will continue to carry out its former policies.

Service Is Best Foundation for Business Success.

The price of your merchandise is only one of the factors in any trade you have. Price is important, of course, but so long as it is not out of line for what you deliver—besides merchandise—it is not the vital thing you think it is. Your first job is to retain all of those customers; and to do that, you will have to think back over the things, the points of service and goods, which have got you those clients. Next job is to add as many to that number as possible, and my impression is that you will do that by continuing the character of service that has enabled you to build the trade you now have.—M. Findlay.

"Strike while the iron is hot," is a good maxim—but care should be taken that the head is cool.

Indirect Heating and Ventilating Work Requires Much Square Duct Work.

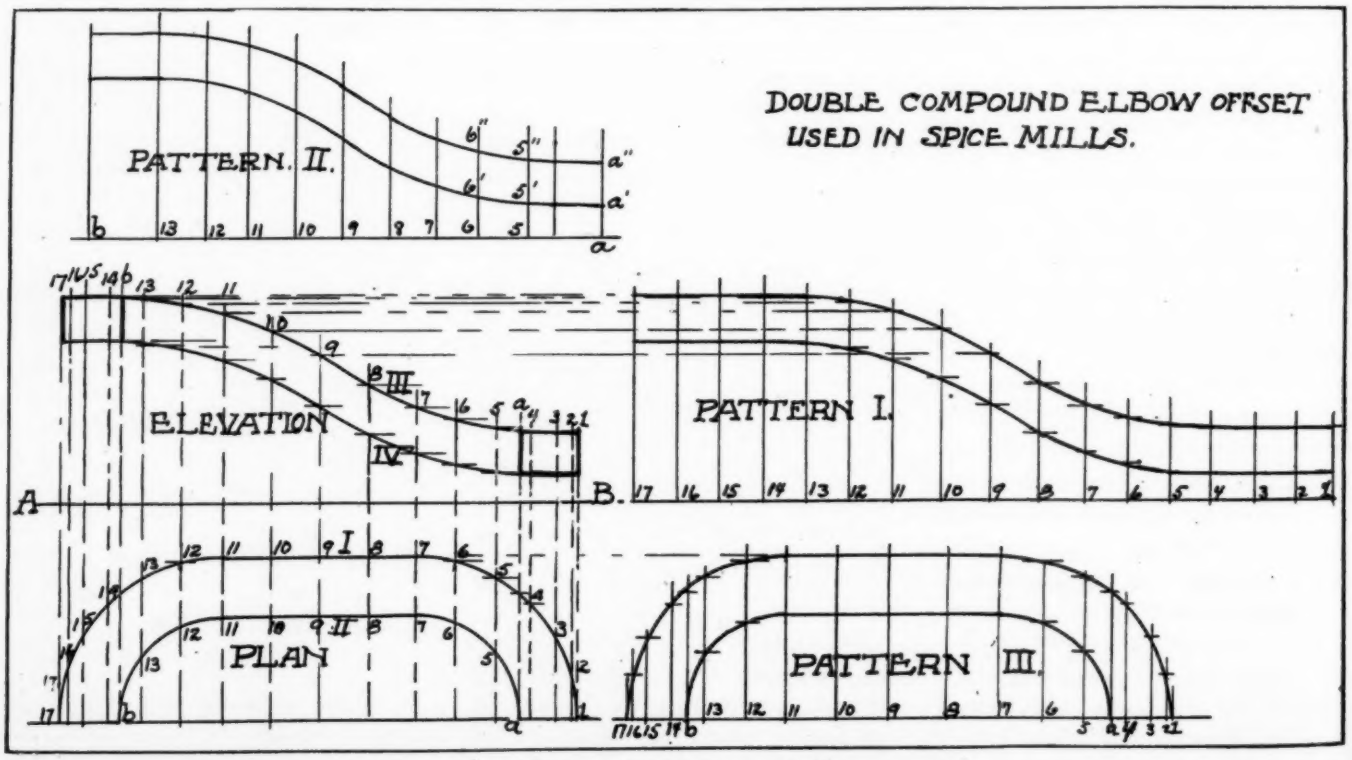
Kothe Shows Pattern for Transitional Elbow as Well as an Offset.

Written Especially for AMERICAN ARTISAN by O. W. Kothe, Principal, St. Louis Technical Institute, St. Louis, Missouri.

IN INDIRECT heating and ventilating work, as well as in many other forms of piping, where square duct work is met with, many peculiarly shaped fitting are designed by engineers, in order to get around close positions. In illustration shown we have an elbow that has an offset as well as transforms from a square to a rectangle. The heel elevation shows the opening, as A-B-C-D, while the base F-E shows the length, and 15-16 of plan shows the width, while the distance E-G shows the amount of off-set this elbow must make on the one side. Problems of this kind require four separate patterns, since each cheek is of different length or has a different flare. We first describe the center line of plan from corner -b- and then we measure our width as 1-2 on the one end and 15-16 on the other end. By a series of trials with the compass we then locate the centers a and c, in order to intersect points 2-16 and 1-15. When these arcs are described, we divide each one in the same number of equal parts as shown.

After this we draw the heel elevation, making the size of the rectangles as become measurements, as well as the off-set E-G. From E and F draw corner lines to B and C also A and D. Then from each point in the heel of plan project over horizontal lines to intersect the heel elevation lines E-B and F-A. In the same way from the throat of plan project over lines to intersect those in the heel elevation as E-C and F-D; these latter lines are underneath and we make them dotted, since they are hidden from the eye.

Now, the heel and throat of the elbow can be developed by the projection method, while the cheeks are developed by triangulation. To lay out the throat pattern pick the girth from plan as spaces 2-4-6-8 to 16 and set them on a line as 2-16 below heel elevation. Through each of these points we draw stretch-out lines and then from each point in throat lines E-C and F-B we drop lines into lines into stretch-out, thus cutting lines of similar number as in points 2″-4″-6″, etc., to 16″. This enables sketching in these curbed lines and gives the outline for throat pattern. To set off the pattern for heel we pick the girth from plan, as 1-3-5-15, and set it on a line, in this case to the left of heel elevation. This pattern can also be developed the same as the throat by placing it either above or below the heel elevation. But since space here does not permit, we place it where shown and pick the projections with dividers. Thus we use the vertical line B-G as a set line and from it we pick the heel lines intersections of E-B and F-A and set them in the stretch-out for pattern. This enables us to establish points 1″-2″-5″, etc., and when



Patterns for Transitional Elbow.

a curved line is sketched through these intersections the pattern for heel is finished.

Observe that the edges of the cheeks must fit to these curved lines in pattern of throat and heel, so that the cheek for side F-A-D will have a girth as 1″-3″-5″, etc., to 15″ in the heel of cheek and 2″-4″-6″, etc., to 16″ as girth in the throat of cheek. When these lines correspond they will be both of the same length and the patterns will fit perfectly. The true lengths required for the triangular lines in plan are only developed for the dotted lines, since they drop from one point to another between lines. The solid lines in plan as 3-4, 5-6, 7-8, etc., are already true lengths and are picked direct from plan to maintain the pattern to this width in these points. So we pick the dotted lines from plan and set them in diagram of true lengths on the base line numbering each point as shown. Then we pick the differences of the throat and heel lines in the heel elevation and set them on the vertical line, which gives us the amount of drop between the two different points.

To set off the pattern draw any line as 1-2 in plan and set compass to girth space 1″-3″ of heel pattern, and using 1 in pattern of center, strike arcs in point 3. Then pick the space 2″-4″ from throat pattern, and using 2 in pattern as center, strike arc as at 4. Now pick true length 2-3, and using point 2 in pattern as center, cross arcs in point 3. Next pick plan line 3-4, and using point 3 in pattern as center, cross arcs in point 4. After this pick the girth space 3″-5″ and 4″-6″ from patterns and strike arcs 5 and 6 in cheek pattern. Cross these with true lengths 4-5 and 5-6 of plan as shown. Continue in this way until points 15 and 16 are established, which enables sketching uniform curves through all intersections and the pattern is finished. The other cheek pattern would be developed in the same way by developing a new set of true lengths and using the inside of the right-hand girth line in the pattern of heel and throat. Remember each girth space must be picked separately, since there is a variation in them. Edges for seaming or joining the corners must be allowed extra.

Michigan 1924 Sheet Metal Roster Is Published.

The 1924 Roster of the members of the Michigan Sheet Metal and Roofing Contractors' Association and Travelers' Auxiliary has just been published. It contains 76 pages of useful information for the sheet metal contractor.

The list of the sheet metal contractors is arranged according to cities and shows that the state is getting well organized, locals being active in twelve of the larger cities. Detroit has the largest membership with 38. Grand Rapids comes next with 26. Kalamazoo has 12. Jackson 12. Saginaw 12. Lansing 10.

The Auxiliary list in the rear is arranged in alphabetical order, giving the name and home address of the members and the name and address of the firm which he represents, so that it is easy to ascertain whether a salesman belongs to the Auxiliary. We quote from the introductory:

"This book, giving the names of the Association Members and the Auxiliary Members is issued for a purpose. Do not destroy or mislay it.

"Before quoting prices on work in another city, look in this book and be informed if there is a member who is more entitled to the work than you are; then do as you would like to have a member of the Association do by you, if circumstances were reversed.

"When you wish to purchase any material *look in this book*. You can get anything you require from good fellows representing good firms who are boosting your game. They are entitled to your business."

August 21, Date Set for Wisconsin Sheet Metal Picnic.

As reported in last week's issue of AMERICAN ARTISAN, the Milwaukee Sheet Metal Contractors' picnic and annual outing will be held Thursday, August 21, 1924. Knebele's Grove, Mequon, Wisconsin, will be the scene of action.

Invitations have been sent to more than 500 sheet metal contractors in the state, and if they want to have a real good time they will surely attend.

Write for full information to Paul L. Biersach, 661 Hubbard Street, or R. E. Kelm, 367 Third Street, Milwaukee.

Those going via automobile will take the Green Bay Road to Mequon. Those going via the Milwaukee Northern Railroad should get off at Mequon.

Steel Industry Told to Stop Pittsburgh Plus Practice by Federal Trade Commission.

The federal trade commission has issued a cease-and-desist order directing the discontinuance of the Pittsburgh plus practice of quoting steel prices.

The commission's decision was not entirely unexpected by the steel industry.

It is well to bear in mind, however, that the cease-and-desist order does not abolish the practice. Pittsburgh plus may be finally settled in the highest courts of the land to which the steel industry may perhaps appeal its case, and in accordance with strict legal principles.

It will remain for the courts to say what may appear to be an economic wrong comes within the sphere of violation of law. The minority opinion of one member of the trade commission gives expression to this question. This opinion suggests the doubt which has been in the minds of many students of this case, whether the selling of steel on a delivered price basis irrespective of place of manufacture and figured against a Pittsburgh valuation, contravenes the law.

The kind of goods least likely to become dead stock are the standard goods of known brands. The dead stock is usually in a large degree orphan brands.

Ohio Sheet Metal Contractors Dive Into Apprentice Training Problem at Columbus Convention July 22 to 24.

Cost Accounting and Status of Industrial Association Taken Up With a Will.

HALT! Who's there! It was the challenge of the P. O., the guard before the gates of Columbus, Ohio, on the night of July 21st as he stopped the automobile containing the first contingent of the advance guard of Ohio sheet metal contractors entering Columbus for the convention which opened at the Southern Hotel July 22nd and continued in session until Thursday, July 24th.

Tuesday's Session.

The convention was opened promptly by President George Dietz, Jr., instead of Arthur P. Lamneck, as was scheduled. The invocation was read by Reverend T. Lehman of St. John's Evangelical Church, Columbus, followed by the singing of "America."

The address of welcome was delivered by Mr. Dixon, Jr., of the committee on conventions and publicity, while the response was left to the devices of George Thesmacher.

John H. Hussie, representing the Nebraska association, brought the greeting of his association to the members of the Ohio assemblage and said howdy.

Allen W. Williams of the National Warm Air Heating and Ventilating Association, spoke on the progress being made on the Research House at the University of Illinois. He also made some remarks on legislation.

E. L. Seabrook, secretary of the National Association of Sheet Metal Contractors, was also introduced, but confined his remarks on this occasion to a few humorous monologues.

Adolf E. Munkel then announced the plans and arrangements for the entertainment of the ladies during their stay in Columbus.

The appointment of committees was delayed until the afternoon session, at which time the committee on resolutions, with the following named men, was appointed: John Gerkin, Toledo; C. M. Gundlach, Sandusky; H. S. Haslett, Columbus.

Convention Committees.

Stanley Allen, general chairman; F. G. Mirick, treasurer; A. E. Bogen, secretary.

FINANCE.

W. E. Lamneck, chairman; F. G. Mirick, Frederick Palmer.

George Dietz, Jr., Retiring President.

ENTERTAINMENT.

A. E. Bogen, chairman; A. E. Munkel, H. S. Haslett.

RECEPTION.

John N. Schilling, chairman; O. J. Green, George E. Snyder, J. R. Dunn.

HOTEL AND TRANSPORTATION.

Wm. J. Kaiser.

PUBLICITY.

George F. Mooney, chairman; A. P. Lamneck.

PROGRAM.

W. E. Lamneck.

LADIES' RECEPTION.

Mrs. A. E. Bogen, chairman; Mrs. A. E. Munkel, Mrs. Stanley Allen, Mrs. George Ripple, Mrs. G. E. Snyder.

INFORMATION AND RESERVATIONS.

W. E. Lamneck.

The afternoon session proper was opened with the report of President Dietz.

Address of President George Dietz, Jr., Ohio Sheet Metal Contractors' Convention.

The tenth annual milestone in the forward journey of the Ohio Sheet Metal Contractors' Association finds the association in a vigorous condition and its members have a fairly accurate appraisal of their responsibility to the industry and the public.

Last year we made an advance movement when we inaugurated the new plan of employing a paid secretary. Our example was followed by a number of states, which promises a rapid advance in the strength and usefulness of the national association.

The first year's operation under the new plan has been conservative, as we were merely trying to find ourselves.

It was apparent that the $3 per capita yield to the state association would not permit of a vigorous and aggressive campaign, either for members or for more constructive work; therefore, without increasing the heretofore meager expenditures we have strengthened and solidified the existing local associations and prepared plans for energetic efforts the coming year.

Ohio is one of few states with so low a per capita assessment and this convention should fully consider the matter of increasing the revenues. There are fifteen towns in the state that could support a local association. There are twice as many more that should be represented by a number of individual memberships and, in addition, there are several hundred contractors scattered out over the state in the smaller places who

should receive our appeal to affiliate with us.

When you come to consider the field of prospects capable of being organized, you will realize that aside from the amount of work involved, the expense will be considerable.

No matter what plan or method you employ, whether it be by mail or by personal solicitation or the more logical and intensive plan, of personal solicitation and by mail the cost is going to be considerable, but the benefits that would accrue to the industry through a perfectly organized state will be well worth the cost. Your present investment in your organization is so meager that you can hardly expect a mammoth return. As a matter of fact the mechanics employed by most of you invest ten times as much in their workmen's organization as you do in your employers' organization.

We should provide a way to keep up a closer personal touch between the rank and file of the members, in order that the many features and details of organization work would be more continuous and fruitful; until such time as the locals can partially compensate some one of their members for serving as secretary, who is selected for his fitness and his opportunities for the work, and made responsible, by the compensation, for devotion to the duties of the office, I would recommend that the state office communicate direct to the local membership. There is an abundance of valuable information that ought to be available to our membership at the proper time. This would mean numerous communications and this again raises the thought of revenues.

Standards of Materials Needed.

The subjects of Business Ethics and Uniform Trade Practices has been discussed for a long time. The need and justification of such a code in industry has been emphasized by the Chamber of Commerce of the United States, by the adoption of fifteen principles which is submitted to its local bodies for approval, our association should use this code as a foundation upon which to build a code that will fit the needs of the sheet metal industry as a guide to fair and intelligent competition.

The continuing increased cost of building construction has led to the substitution of flimsier construction and cheaper materials and our industry has not entirely escaped its harmful influence. When you consider that the labor and overhead costs are the same on poor material as it is on that of higher standard that has a much longer life, it is apparent that the waste is almost criminal and the sheet metal contractor should use his best efforts to prevent his industry being debased in this way. The way to solve this problem

L. W. Henslee, President.

is to collectively fix proper standards of materials and efficiency and then educate the public to an appreciation of the value of the higher standards through collective advertising and enactment of municipal building codes. Some associations have gone so far as to guarantee the quality and efficiency of their members' installations.

The tremendous increase in unnecessary sizes, gauges and finish of materials in all lines of trade is a fearful waste, therefore, a great deal of intelligent attention is being given to standardization, and we would recommend that the sheet metal contractor do his part in bringing about this reform.

How the Sheet Metal Cornice Can Be Rejuvenated.

Sheet metal cornices are coming back, provided the trade in the various states does its part in agitating for the cause. Many state associations are providing funds and preparing campaigns for the coming year and Ohio should not be behind. We would recommend that the leading manufacturers of this class of work should get together at an early date and map out a course of definite procedure such as communications with architects and owners and general agitation.

Perform Civic Duty.

It has been truthfully said that in a representative government such as ours "Public Business Is Private Business," but evidence continues to accumulate that indicates the business man, the man who owns and directs productive property, is becoming apathetic and indifferent in utilizing his right of franchise and is leaving the voting to his employes.

The percentage of eligible voters participating in election is gradually but steadily decreasing. In 1896 80 per cent of the voters cast their ballots; in 1920 only 50 per cent voted.

No more sacred responsibility rests upon the business man than that he take an energetic part in public affairs and thus help to preserve the constitutional privileges handed down to us by our forebears.

In this day of rapid industrial progress and mass action, individual effort makes but little impress and a single voice is not heard above the din. An industry, in order to progress and prosper must collect and combine all of the intellect, integrity and economic recourse contained in that industry and direct it vigorously to extend its usefulness in public service, or it will be superseded by a more alert competitor,

Do Not Fear or Despise Competition.

Trade jealousies and animosities belong to a past age and must be eliminated as a thing harmful to the possessor and his neighbor. If he thinks every one is his friend, he will treat them right, unconsciously and they soon will be his friend. Competition is not to be feared or a competitor despised. Competition and coöperation can proceed hand in hand in perfect amity and accumu-

late reliable information respecting their common industry while competing for its rewards. Out of conference, mutual counsel and contact come the common understanding and united efforts that bring wonderful results.

Therefore, the achievements of an industry of the future will be measured by its ability to coöperate.

* * *

E. W. Myers, assistant supervisor of trades and industries division of Ohio Board for Vocational Education, delivered an address on "How the Public Schools of Ohio and Industry Can Coöperate in the Training and Education of Workers in the Sheet Metal Industry." In this connection he outlined the system of vocational educational system of Ohio, taking up first the evening school, then the full time vocational school. At the latter, he stated, one-half of the time was spent at practical sheet metal work, the balance of the time being divided—35 per cent on advanced methods, etc., and 15 per cent on citizenship. His concluding remarks covered the work being done by the part time schools, at which certain half days are set aside in each week for the apprentices.

Vernon Riegel, director of the Ohio Board for Vocational Education, spoke on the necessity for training men to give society a service in the best possible manner, making him a good citizen and one who is willing to recognize his responsibility toward the state and city where he lives, and to fulfill that responsibility by rendering a useful service to that community.

It was his opinion that the coming citizen must be convinced that manual labor has just as much dignity to it as any "white collar job."

Secretary George F. Mooney then introduced Malcolm Jennings, executive secretary of the Ohio Manufacturers' Association and chairman of the Ohio Industrial Conference Board, by saying that if there are such things as classes in the United States, the class of employers needs education more than anybody else, because these men as a class have a greater responsibility than any other group.

Mr. Jennings talked on practical patriotism (not the waving of the flag variety, not the pride in the fact that this is a great progressive country, but the standing by the institution because of which we have reached the high position that we now enjoy). The sum and substance of his talk was that the average voter is less than 50 per cent efficient. In 1920 twenty-six millions cast their votes, while twenty-seven million voters did not cast their ballots. "We owe it to ourselves and to those who are dependent upon us to take a truly active interest in public affairs and practical politics," said he.

George F. Mooney,
Re-elected Secretary.

The report of Treasurer W. J. Birmingham, which was next made, showed a good financial condition of the association.

Out of the maze of laws that are placed yearly upon the statute books of each state and of the national government the citizen is expected to govern his daily activities. Thomas P. Kearns, chief, division factory inspection, Industrial Commission of Ohio, took it upon himself to explain the workings of the Ohio laws on factory inspection and liability compensation.

This was followed by the report of the state secretary, George F. Mooney.

Secretary Mooney's Report.

Little did I think, some years back, when I was accorded the honor of an invitation to talk to you that some day I would have the honor and privilege of being your employe.

I do esteem it an honor to occupy a place of trust and responsibility with your members. I have been in close contact with the various units composing the building construction industry for a good many years and have been intimate with sheet metal contractors all of my business life and long ago I discovered that the sturdy manhood and sterling integrity of the sheet metal contractor was a potent influence in preventing the building industry from being debased and prostituted.

The finished product of an association is peculiar in comparison with that of most business concerns, in that it is intangible, it cannot be placed on your shelves and inventoried or measured with a 2-foot rule, or placed in bank to your credit to check against, yet its benefits and dividends are real and none the less substantial.

To realize its true worth, one must be an active member and participate in its aims and aspirations and then in retrospection, look back over the past and recall what was and what is. Its benefits are spread over the active and inactive alike, but only the active can appreciate the cause and effect.

If men having a common interest and aim, but meet in social intercourse, the benefits that come to them is immense, but when men of a common industry will commune in a friendly spirit and combine their talents and resources in coöperation for the purpose of improving and building character into their industry for the public service, then their reward is big in substantial goods and spiritual satisfaction.

In this intensive era, no man can live alone unto himself and prosper, nor can he play the game unfairly without paying a galling penalty.

The nature of secretarial work of an industrial association makes it difficult to make an interesting report. The worth-while things are

those that are transpiring from day to day, the collecting and sifting and sorting of matter in the search of truth and useful information, the struggling with the vague and indefinite that floats about, in an effort to isolate and define a problem, the groping around to obtain the necessary coöperation and experience to determine upon the solution of a problem after it is found, the collecting at a central point the things of interest from the remote ramifications of the organization and then broadcasting it back to its sources.

You must bear in mind that a secretary can only be an intermediary, and to be useful he must have the sympathy and cordial coöperation of all whom he may call upon or be in touch with and if he be zealous, industrious and fairly intelligent, it should be given him without stint.

Encourage Auxiliary Members.

Mr. Mooney urged that members impress on salesmen calling on them to join the auxiliary in order to strengthen their own organization, because only under such conditions can the auxiliary members really do much aggressive work among sheet metal contractors who are not in the state association.

A gain of more than 10 per cent in membership was recorded.

Secretary Mooney gave the following resume of the activities of the secretary's office:

Correspondence.

Local Associations	50
Individual Members	53
Auxiliary	17
Treasurer	37
National Secretary	43
Trade Journals	40
General Correspondence	75
Circular Letters	1,049
Circular Letter with Auxiliary Roster	1,020
Total	2,384

Visits.

Cincinnati	1
Cleveland	1
Dayton	2
Zanesville	2
Newark	3
Springfield	1
London	1

The trade journals were accorded appreciation for their generous coöperation with many pages of valuable publicity.

Just before adjournment the report of the committee on industrial training was made.

Report of Committee on Industrial Training.

Apprenticeship or industrial vocational training is one of the most vital questions that confronts this country and while the serious side of the question is widely recognized, yet there is a woeful lack of concert

W. J. Birmingham, Retiring Treasurer.

and coöperation in the attempt to solve it.

This is now an industrial nation and the happiness and tranquility of its people depend just as much upon the per capita production of wealth in the factory as from the farm and mine, and yet almost the whole trend of public education is in the opposite direction; such surveys as have been made indicate that approximately 5 per cent of those engaged in gainful occupations are in the professions and 85 per cent in trades and industry; of all the pupils in the public institutions of learning 85 per cent are headed for the professions and less than 5 per cent for the trades and industry. When we recall that the public schools enroll nearly all of the rising generations we can realize that if this state of affairs continue the meager skill of the present will be further diluted with unskill and the cost of production will continue to increase and thus restrict the wide participation in the good things of progress by the whole people.

Three Outstanding Vocational Training Efforts.

There seems to be three outstanding efforts towards vocational training at present. The Smith-Hughes law is the result of a nation-wide acknowledgment of the necessity of action in a big way and while substantial results are not yet apparent, it is a movement in the right direction and will evolve into a solution of the question if it is not hamstrung by parasites.

Some communities and a few individuals have established special schools for industrial training and in the few places where they exist good results are being accomplished.

In a small number of cities, scattered over the country, the contention between the building executives and closed-shop unionism became so intense that the executives cut loose from their former affiliation with the unions and established schools for the intensive training of men in those basic trades that are largely muscular and obtained immediate results of a substantial nature.

But none of these efforts promise any substantial relief for this, or possibly the next generation and if we dare to hope for immediate results we are compelled to the belief that the practical industrial executive must assume the leadership and pioneer the way.

We have heard the responsibility buck passed by many eminent men on many occasions for the lack of apprenticeship training and organized labor is generally cited by the building executives; it may be true that closed-shop unionism and unfortunately assisted by some executives, under an erroneous theory of economics, has, is and will probably continue to use its influence and resources to restrict the supply of skilled mechanics far below the public needs, but the responsibility is widespread and extends from the

parent in the home to the employer in his executive office.

Social and industrial progress has been so tremendously rapid and vast in the United States that the people have been swept off their balance and have not made commensurate progress in the economics involved and this, we believe, is the one great fault and it is high time we were regaining our balance.

Industry did, no doubt, exploit childhood and later the sociologist exploited it, and there is good reason to question which have done him the most harm. It is now, generally, unlawful to employ the youth or adolescent at labor, and as a result he has lost the opportunity to coördinate mind, eye and muscle, without which advantage in his formative period he will be terribly handicapped in his later mechanical effort.

We have the highest respect for the pedagogue in their proper sphere, but there is cause for more than a suspicion that their unpractical environment leads them to hostility to the theory of industrial training and it is openly charged that many public school executives are opposed because they fear the industrial executive might attempt to interfere in their school politics.

Some eminent leaders in education have erroneous slants or viewpoints on economics. It has been asked by them, "What inducement has your industry to offer the apprentice?" and they have gone much farther in their error and have said, "I don't blame a boy for not becoming an apprentice," thus implying that you, as single employers or as a branch of trade, should hold out some sort of bait, and upon what it should be they are silent, to entice the boy into your shops.

It is not industry, but society at large that pays the reward and those who are best fitted will obtain it the earliest and in the largest measure.

We have the outstanding fact that society at large has cheerfully given to a plain mechanic one billion dollars in profits, in a few years, because he supplied their needs better than his competitors.

A casual inquiry will convince you that the high schools and the institutions of higher learning will not supply the increasing demand of industry for mechanics, nor do the average needs require such an academic training. The present supply comes, largely, from those youths who leave school at the period that the law permits them to go to work and they stagger forth and grope around for that employment which long ago it was known they must rely upon and without any special fitness to enable them to deserve a wage that his maturity exacts. And what follows? He drifts to the automatic machine that requires but little brain action and he arrives at middle life without having enjoyed that great life enriching boon and consolation of shaping useful and beautiful things out of crude materials by the coördination of mind, eye and muscle.

Industry in the United States will not be supplied with sufficient skilled mechanics, as the law now stands, until one-half of the floor space of our public schools is devoted to instruction in courses that are essential to mechanics with the last two years providing for the education of the hands.

The great deficiency of the hour is the scarcity of teachers in mechanical subjects. At present it would be difficult for a highly skilled mechanic and executive to qualify as a teacher for the reason that, according to the present fixed code, he is not a teacher, therefore, we can offer no better advice than that the employer should devise means of having practical skilled men such as their foremen and their sons who are coming up in the industry, to become qualified as industrial teachers. The Smith-Hughes law provides funds for this purpose.

The subject is too big for your committee to recommend a program, but we do recommend that you take the data that is available and use it to bring about a change in the minds of parents so they will understand that industry offers the best avenue to the big rewards and when they are convinced they will see to it that their boys are headed for a useful and profitable career.

We commend all attempts at vocational training as a valuable aid in demonstrating the need and leading to the conclusion that larger efforts must be inaugurated.

A smoker was held in the evening.

Wednesday's Session.

"America" was sung at the opening of Wednesday's session.

P. S. Bradford, attorney at law, made an address which took up the status of Industrial Associations, the operations of the Mechanics Lien Law and Industrial Rights of the Association.

No convention would be complete without a discussion on cost accounting, as many of the members depend upon these meetings to keep themselves informed on the latest methods of accounting.

H. W. Wiess, accountant with Beman Thomas & Company, gave a very able address on cost accounting. This address will appear later in AMERICAN ARTISAN.

The reports of various committees were then heard.

The following resolutions were adopted:

Resolutions.

That a special delegate be appointed to attend the meetings of the National Warm Air Heating and Ventilating Association.

That regret and sympathy be extended to the families of Frank B. Chew, late editor of *The Sheet Metal Worker;* Frank B. Higgins, for many years first vice-president of the national association, and George B. Carr, who was long intimately connected with the warm air furnace business, in the loss by death of these well-beloved and honored men.

That this convention favors the elimination of gauges lighter than 28 gauge in the manufacture of conductor pipe, shoes, elbows and eaves trough. Also the discontinuance of sizes and shapes not necessary.

That this convention goes on record in favor of the resolution passed by the national association in re-

gard to the requiring of general contractors to furnish names and amounts of subcontracts.

The industrial relations committee reported as follows:

Report of Industrial Relations Committee.

The inadequate supply of skilled labor for the peak business in 1923 resulted in "snow balling" or bidding for mechanics by the employer and the peddling of the service of men to the highest bidder by the business agents. This brought about an increase in wage rates far above the existing fixed scales. Notwithstanding that the supply of labor, in most places, was adequate in 1924, by reason of slackened business, yet demands for increased scales up to or beyond the peak rates of 1923, have been made and in many places have been granted.

The employer submitted to demands on the erroneous theory, that if business held to the peak he would get by and if it slackened there would be no cause for argument.

The direct labor costs of building construction is about 44 per cent of the whole cost and when you add the cost of decreased production that follows in the wake of artifcially high wages, a burden is imposed that sends the purchaser of buildings on a buyer's strike.

The most ruinous and destructive influence of these uneconomic conditions upon the integrity and prestige of the building industry is pointed out by the American Construction Council, from which we quote, "At present, building construction costs are at a high level in spite of the mistaken attempt to decrease such costs by poor construction." "One very serious situation confronting the country and requires special attention. A large percentage of present-day building construction throughout the country is distinctly inferior in quality."

"Thousands of such structures now under way, or recently erected, especially in housing, are subject to such rapid deterioration that within ten years' time, sometimes less, they will be practically valueless."

Such a warning coming from so eminent authority should cause men, whose lives are entwined with this industry, to give serious reflection and manly action.

We believe that a wage rate that will insure the accepted American standard of living and will preclude a reasonable dissatisfaction of the employe and that makes for the perpetuation of an industry is a proper charge against such an industry, but it must be based upon sound economics and commensurate with the value of the service rendered and not actuated by sentimental catchphrases, invented for the purpose of misleading the feeble logic of unthinking people.

The flat wage scale is crude and out of harmony with present day progress and ought to be eliminated in all industry. It holds its place solely because it is easiest to calculate and adjust. The man who produces little or of inferior quality should not receive as much as the faithful, skilled worker. Workmen should be rewarded according to their ability to do things which will reduce the cost of doing business.

In the last decade the population has increased 15 per cent, building construction increased 300 per cent and building mechanics decreased 20 per cent.

The census bureau gives us the following enumeration of building mechanics in 1910 and 1920:

	1910.	1920.
Bricklayers	161,000	131,000
Plasterers	47,000	38,000
Roofers and Slaters	14,000	11,000
Stone cutters	35,000	22,000
Painters and Glaziers	273,000	248,000

All other crafts show a proportionate decrease except electrical wiremen. The new immigration law will exclude, annually, 15,000 to 20,000 building mechanics that have been coming to us from foreign countries.

This alarming situation should certainly induce business leaders to put their mental faculties to work and find a way out.

The right of workmen to organize for the improvement of their condition is certainly a sacred right and shall not be denied them, provided, they operate within the law that all other groups must observe. But who will deny that closed-shop, unionism, has contributed greatly to the unbalancing of a natural supply of building trades mechanics and worse still, it has encroached upon the prerogatives of management until the executive is prevented from giving society the benefits of his managerial talents, where the closed-shop prevails. It is an alien institution and in conflict with the spirit of Americanism and it is opposed to public policy.

We have frequently heard it said, "It is a condition." This was uttered with a deflection of the voice, to imply that since it is a condition, it should be accepted and make the best of it. It is too true, that in many important cities it is the condition, but it is such a condition that men who fairly appraise the value of the almost God given heritage, handed down to them by the patriotic colonists, should exert every fibre in their constitution, at every opportunity, to drive it from our land.

The employer has been making temporary compromises with the principles involved by making concession after concession until now, the day of reckoning has arrived and the employers should, at least, make an effort to recover some of the many prerogatives that by right of law belong to them as executives.

We would recommend that a copy of all labor contracts or implied contracts be filed with the state secretary and that no new contracts be entered into without first comparing it with the records on file and that a determined policy of resistance to further encroachments be made.

We agree with the slogan that "Labor is not a commodity," because of the human element that enters into it, but that catch phrase was invented for the purpose of directing the thoughts of men away from the great fact that "Labor is a property right" and the right to work will always be more sacred than the right to strike.

We agree with the statement made by our eminent Secretary of State, the Honorable Charles E. Hughes, "There is no more important concern than to safeguard the freedom of labor."

The legislative committee also reported.

Report of Legislative Committee.

The general assembly of Ohio not having a session this year simplifies our report so far as state legislation is concerned. As you know the initiated bill providing old age pensions was defeated by a two to one vote at the last general election, but this pernicious measure, sponsored by the Association for Labor Legislation, the Order of Eagles and the Federation of Labor, will, no doubt, be again revived and the sheet metal contractors should again do their part to aid in its defeat.

The amendment to the fundamental law eliminating the so-called open liability and strengthening the workman's compensation law was passed. This amendment carried with it a penalty of 15 per cent to 50 per cent additional award against the insured for failure to conform to specific requirements. It behooves the sheet metal contractor to inform himself of and comply with specific requirements.

The attitude of Congress caused industry no little concern and was, no doubt, largely responsible for the feeling of uncertainty that has halted business progress.

While the 68th Congress was generally regarded as radical and anti-industrial, yet the first session enacted only four measures of major importance.

The Revenue Act fell far short of stimulating industry and the money that should flow into extensions and expansions will still continue to seek tax free investments.

The Immigration Bill, likewise, is not an intelligent measure or in accord with sound economics. Restrictive immigration is a sound national policy, but it should be selective.

It never should be made wholly impossible for law abiding and industrious people seeking a new home to secure entrance to this country and increase the army of producers. The passage of this measure will require a more intensive economizing on labor and a still further development of mass production and probably a surrender to Europe of these lines of industry which call for a great deal of hand work, and higher cost of living will result for everybody.

Both houses acted favorably on the resolution proposing an amendment to the constitution which would give Congress complete authority to regulate or prohibit the labor of all persons under 18 years of age. Before the proposal can become effective, it must be ratified by at least three-fourths of the several states.

At this session 13,734 bills and resolutions were introduced and 327 were enacted into law.

All bills introduced and pending retain their status on the calendars or before committees and are subject to consideration and action when the Congress convenes for its second session on December 1st.

Among the most dangerous measures pending are the Howere-Barkley Bill that proposes to abolish the present Railroad Labor Board, which would deprive the public of representation in disputes between railroad employes and managers and would compel every railroad worker to join a railway labor union in order to earn his living. This measure has been voted out of committee and is now before the house for passage without adequate hearings or discussion for intelligent action. Like the Adamson Bill, this bill is sponsored by the railway unions and the American Federation of Labor.

This Congress has gone farther than any other in compelling, through an appropriation limitation, the manufacture of government requirements in government establishments. Thus we have more government in business rather than more business in government.

A great many bills that aim to break down the judicial arm of our federal constitution have been introduced. This is the most revolutionary and destructive legislation that has ever been proposed.

A learned, courageous and independent judiciary of high character, finally interpreting in a Supreme Court the power and limitations of a written constitution, is the invincible protection of every citizen against the unauthorized use of political power.

Congress has long since stopped considering what is the sound, economical thing to do and is considering only political expediency.

Our recommendation is that no more grave duty confronts an industrial association than to keep itself well advised upon the trend and effect of proposed legislation and raise its collective voice and wield its united economic resources to stop the wrecking crew.

Election of Officers.

The election of officers resulted as follows:

President — L. W. Henslee, Zanesville.

Vice President—Stanley Allen, Columbus.

Secretary—George F. Mooney, Columbus, re-elected.

Treasurer—F. G. Mirick, Columbus.

The directors elected for two years are P. E. Sullivan, Dayton; John Vogeli, Toledo; John Weigle, Cincinnati.

The holdovers on the Board of Directors are: George Thesmacher, Cleveland; A. P. Lamneck, Columbus; M. B. Armstrong, London.

The membership dues were voted raised from $5 to $10 per year, and will hereafter be $10 per annum instead of $5 as heretofore.

The convention held its closing session after the banquet.

At 6:30 p. m. a dinner dance and entertainment was held in the ball room of the Southern Hotel.

Contributors.

The following manufacturers contributed to the fund to help defray the expense of the convention:

American Rolling Mill Company, Middletown, Ohio.

Art Wood Face Company, Wooster, Ohio.

Auer Register Company, Cleveland.

Berger Brothers Company, Philadelphia.

Canton Art Metal Company, Canton, Ohio.

Central Ohio Paper Company, Columbus.
Columbus Heating and Ventilating Company, Columbus.
Columbus Slate Company, Columbus.
David Lupton Sons Company, Philadelphia.
Diem & Wing Paper Company, Cincinnati.
Ferdinand Dieckmann Company, Cincinnati.
Forest City Foundry and Manufacturing Company, Cleveland.
Hanna Paint Manufacturing Company, Columbus.
Hart & Crouse Furnace Company, Columbus.
Homer Furnace Company, Coldwater, Michigan.
Hot Air Guide Company, Dayton, Ohio.
Ph. F. Kromer & Son, Columbus.
W. E. Lamneck Company, Columbus.
Lennox Furnace Company, Marshalltown, Iowa.
Ludowici-Celadon Company, Chicago.
National Paint and Varnish Company, Cleveland.
Newport Rolling Mills Company, Newport, Kentucky.
Ohio Metal and Manufacturing Company, Dayton, Ohio.
Orbon Stove Company, Belleville, Illinois.
J. M. & L. A. Osborn Company, Cleveland.
Palmer-Donovan Company, Columbus.
Pecora Paint Company, Philadelphia.
Perfection Furnace Pipe Company, Toledo, Ohio.
Premier Warm Air Heater Company, Dowagiac, Michigan.
Quick Work Company, St. Marys, Ohio.
Ramey Manufacturing Company, Columbus.
Reeves Manufacturing Company, Dover, Ohio.
Richardson & Boynton Company, New York city.
Salesmen's Auxiliary to the Sheet Metal Contractors' Association of Ohio.
Schwartz Oil Company, Cleveland.
F. O. Schoedinger, Columbus.
Simms Foundry Corporation, Racine, Wisconsin.
Smith Brothers Hardware Company, Columbus.
Streine Tool and Manufacturing Company, New Bremen, Ohio.
Superior Sheet Steel Company, Canton, Ohio.
The Apollo Steel Company, Apollo, Pennsylvania.
The Beckwith Company, Dowagiac, Michigan.
The Hart and Cooley Company, New Britain, Connecticut.
The Hart Manufacturing Company, Louisville, Kentucky.
The Henry Furnace and Foundry Company, Cleveland.
The Morse Rogers Steel Company, Cleveland.
The Munkel-Lamneck Company, Columbus.
Thomas & Armstrong Company, London, Ohio.
Tiffin Art Metal Company, Tiffin, Ohio.
Utica Heater Company, Utica, New York.
Weirton Steel Company, Weirton, West Virginia.
Wheeling Corrugating Company, Wheeling, West Virginia.
Wise Furnace Company, Akron, Ohio.
Youngstown Sheet and Tube Company, Youngstown.

Columbus Gleanings

Ray Taylor of the Fox Furnace Company was present, and so was Mrs. Taylor, so both the men and the ladies were well entertained, for that team can keep any gathering in good humor.

"Tony" Howe, accompanied by Mrs. Howe, and George Roberts, George Thesmacher and "Pop" Henninger, drove down Monday evening from Cleveland. It would be a strange meeting of sheet metal men if Tony and Thesmacher were not there. "Pop" of course did his usual sunt with the notebooks and acid swabs, assisted by Ticknor, for J. M. & L. A. Osborn Company.

A. E. Watson, the Cincinnati boss of the Ton can metal folks, had to attend to two jobs—taking in the money for the auxiliary and selling a few carloads of Berger metal ceilings, etc., ably assisted by Emil Baeckel, their oldest salesman.

Tom Pearson occupied one of the parlors on the convention floor with one of the new Armstrong steel furnaces. "Mart" Armstrong and Charles H. Saunder helped out in taking care of visitors.

An Ohio sheet metal convention would not be a success without the smiling face of Ed Hoffeld, the Dieckmann elbow man. I have known Ed for many years and he certainly manages to keep his age well concealed, just as he knows how to make a good elbow.

The Lamneck pipe and fitting folks were—well represented is not the right word, but it is best I can think of now—by "W. E." and "A. P" and F. F. Foster.

R. S. Thompson must have some pull with the hotel people, for he had one of his "Vernois" furnaces right next to the young lady who made out the name slips for the delegates.

E. T. McNulty was on deck to say a good word for the fine sheets that his concern, the Charcoal Iron Products Company, is making.

"Ros" Strong of the Homer Furnace Company, was as usual one of the fellows who kept things moving during the intermissions between sessions and during the entertainment parts of the program.

National Secretary Seabrook was an interested observer and also helped out in the business sessions with some good advice and some good stories.

Fred Gottschalk, the Utica heater man, thought he would have a nice "cool" time in Columbus, but he claims that it was hotter there than down south, where he has been for the past few weeks.

George G. Auer is "making" most of the conventions that his uncle, George S. Auer, used to make and the boss tells me that "the boy" is doing better for the Auer Register Company than he did in his palmiest day.

Harry Hussie stopped in to say "Howdy." Harry has been doing a lot of business for the Simplex furnace folks in Pennsylvania and Ohio, in addition to his regular business in the west.

The smoker on Tuesday evening was more than a success. It was held on the top floor of the Lamneck factory, which had been cleared for the occasion. Here there were all sorts of fluid refreshments, whole roast hams, rye bread, cheese, potato salad, pickles and whatever else goes with a real Dutch lunch; cigars and stogies—and a fine quartette, intermixed with a trio of colored gents who discovered jazz and sentimental songs.

The real feature, however, was a heart-to-heart talk on "What Makes a Successful Organization," delivered by a gentleman known all over Ohio as "Dusty" Miller. It was worth a good many dollars to every man to listen to what Mr. Miller said. Incidentally, he is the editor of a newspaper in the city of Wilmington, Ohio, and is a good friend of my good friend Monfort of the Farquhar Furnace Company, so we got well acquainted right away.

The banquet on Wednesday night was a very enjoyable affair. The menu was excellent and well served

and the speeches and other entertainment were of the kind that one has come to expect from the Columbus sheet metal men.

The committees who arranged and carried out all the arrangements have every reason to feel proud of their work. They were composed as follows:

John T. Lennon, who "covers" Ohio and Pennsylvania and other semi-eastern states for the Lennox Furnace Company, always has a busy time at these conventions for he has lots of friends among the sheet metal contractors.

Those cute blue caps that A. P. Preyor and Lee W. Gillespie of the "Armco" people distributed at the smoker certainly looked fine on the bald heads, but those with bushy hair had trouble in keeping them on.

F. F. Foster Elected President of Ohio Auxiliary.

A meeting of the officers and directors of the state association and the auxiliary was held Wednesday afternoon, at which President Watson of the auxiliary stated the auxiliary would prepare a roster of the auxiliary for the purpose of informing the members of the state association who the supply houses are that help in the organization work and requested that the state secretary send a copy of this roster to every member of the association.

A complete list of the names of the auxiliary roster is being prepared and will be published in its entirety before January 1, 1925.

Election of Officers.

The men named hereinafter were elected to serve as auxiliary officers for the ensuing year:

President—F. F. Foster, W. E. Lamneck Company.

First Vice-President—Lee W. Gillespie, American Rolling Mills Company.

Second Vice-President — R. S. Thompson, Mount Vernon Furnace and Manufacturng Company.

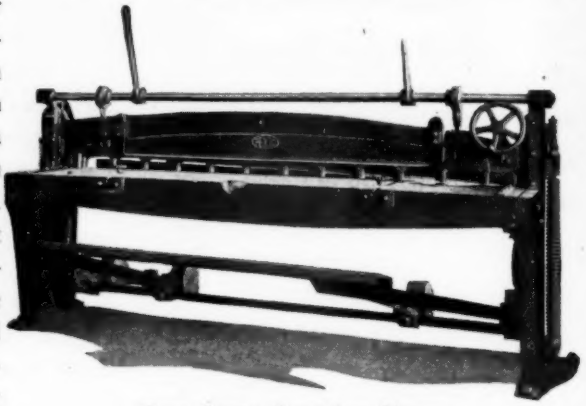
Secretary—H. E. Hogland, 1452 Bryden Road, Columbus.

Treasurer—E. H. Erk, re-elected.

This New Long Length Squaring Shear Is Easy to Adjust.

A new machine recently brought to a finished stage of development and as now ready for distribution is represented in the long-length squaring shears, herewith illustrated, made to cut a sheet 96 inches in width and 18-gauge and lighter.

The Peck, Stow & Wilcox Company, Southington, Connecticut, are the makers and the skill of their designer well reflects itself in these new patterns. The trained eye of the sheet metal mechanic, who has had experience in long-length squaring shear operation, will denote the vast improvement and graceful lines in this well-proportioned shears over similar shears offered heretofore.



New Pexto Squaring Shears.

The hold-down attachment operates independently through accentrics and by means of two convenient hand levers. With this type of hold-down attachment when not depending upon any springs it is absolutely positive.

A feature is found in the rear gauge, which is made of steel fully machined and is adjustable. Using long screws and beveled gears it has an easy movement. With other shears of its kind the operator must go to the rear of the machine to make gauge adjustments, which is not necessary when using a machine of this new type. It will be seen from the illustration that a large hand wheel is located in front and at the right end. This hand wheel is connected with the rear gauge and all rear gauge adjustments are conveniently made from the front of the machine by simply turning the hand wheel.

Another improvement is found in the extensible steel treadle and is so proportioned for making it impossible to operate the treadle on either extreme end of the machine, thereby eliminating any possibility of twisting.

Counterbalance weights are used for returning the gate after the cut is made. Otherwise, additional springs would have to be used and the more springs used the greater the compression making a shears so arranged hard working. With these new patterns it is claimed that one man, without a great deal of strenuous effort, can cut No. 18 gauge soft steel the full length of the cutting blades as long as the blades are sharp and adjustments are good.

In offering this new addition to its already extensive line the company's policy is to get away from tradition and every new machine it brings out must enjoy some feature of individuality. Many of these improvements stand out prominetly in other machines already introduced, and which are covered by patents.

The company is prepared to forward blue prints and provide any further information to all those who are interested.

Two New Members Added to Iowa Jobbers' and Salesmen's Auxiliary.

Louis Roos, president of the Iowa Jobbers' and Salesmen's Auxiliary, announces that two new members were secured for his organization at the Waterloo picnic held recently.

The names of the members added are J. G. Gilley, 330 Oneida Street, Waterloo, Iowa, with the Waterloo Register Company; W. E. Richardson, Delta, Iowa, with the Quick Furnace Supply Company.

President Roos requests that these names be added to the roster by the dealers in the blank spaces left for that purpose.

Sheet Metal Contractors of Pennsylvania Hold Successful Meeting at Pittsburgh.

Seventh Avenue Hotel Scene of Activity July 23 to 25— Apprentice Training a Special Feature of Meeting.

EVERY man owes something to the trade or profession to which he belongs. Is it any wonder then that the members of the Sheet Metal Contractors' Association of Pennsylvania when seen making a grand exodus from their homes and headed for Pittsburgh wore expressions of determination upon their countenances Tuesday, July 22nd, when seen leaving for the Pittsburgh convention?

These men were not bent upon collecting all they could; they were just as anxious to give their share to the assembled body and their hearts were glad.

In this way, then, the Sixth Annual Convention of the Pennsylvania Sheet Metal Contractors came to order at the Seventh Avenue Hotel, Pittsburgh, July 23rd, remaining in session until Friday, July 25th.

Wednesday's Session.

The convention was called to order by Louis Luckhardt, chairman of the convention committee.

An address of welcome was given by City Solicitor Harold M. Irons for Mayor W. A. Magee.

State President D. E. Habercorn responded.

Committees were appointed and reports were read by President D. E. Habercorn of Erie, Pennsylvania; Secretary W. F. Angermyer of Pittsburgh and Treasurer G. C. Krack of Erie.

Secretary Angermyer's report follows:

Secretary's Report to Officers and Members the Sheet Metal Contractors' Association of Pennsylvania.

This is the sixth convention of your association since its organization in January, 1920. We are therefore almost five years old, and those years have been a struggle, which in view of the objects of the association and its possibilities it is rather hard to understand, for association membership has proven its worth to those who have been active in the work in every instance, but yet a vast majority of our trade for some reason or for no reason, still refuses to unite with us, accepting the result of our efforts with a take all and give nothing attitude, that cannot be maintained by any argument of reason or logic.

D. E. Habercorn, Re-elected President.

This association, small as it is, has benefited every individual firm or corporation engaged in the sheet metal business, in actual cash saved many times the cost of membership. It has given us all trade protection, it has secured the assistance and hearty cooperations of jobbers and manufacturers, and Secretary Hoover of the United States Department of Commerce has publicly stated that it's up to business through its associations to regulate itself, if not, the government through legislation must do it for us. This applies to every line of business.

We have only to conduct our business along lines of reason, right and justice, to succeed, and so long as we do this we have nothing to fear, above all things we should first of all be fair to ourselves, that is, receive a just return for the service rendered our customers. Another and possibly a greater accomplishment of association effort is the system of vocational educations established in many of our cities for the the training of more and better apprentices. This subject will be fully covered by others on the program. Very little has been accomplished in organization work during the past year, membership committees were appointed following the Allentown convention, but the results have been negligible. Lack of funds for this work is largely responsible and to provide means to have more effective organization work, your by-laws committee has a recommendation for an increase in dues, which I trust will receive your favorable consideration at this convention, our present dues ($2.00) per member are barely sufficient to pay necessary running expenses.

Most of our local associations have been doing effective work, although showing a loss in membership. In one or two cases it has been necessary to transfer the few loyal local members to the individual class, in spite of special efforts through the mails to get them together. They need the help of a first-class organizer to keep them together. If our organization is worth anything this should be done, and I trust ways and means will be provided soon for the employment of a permanent secretary, as has been done in several states.

Recently we made a trip to Butler and met with the Sheet Metal Contractors of Butler and Evans City. Those present favored the organization of a local but as there was not a full attendance nothing definite was accomplished. However, we

expect to meet with them again in the near future when we expect to complete their organization.

An attempt was made in April to get Johnstown organized but I was unable to get them together although a majority of the sheet metal shops favored an organization.

Tuesday night the delegates and their wives motored to the Carnegie Institute of Technology and the Carnegie Museum. After sessions Wednesday morning and afternoon the delegates motored to a roadhouse for a chicken and waffle supper.

Wednesday afternoon the session was opened by W. J. Keist making his report as chairman of the Vocational Education committee.

This was followed by an address on Industry and Education, by Clifford B. Connelly, Director of Industrial Relations, Carnegie College of Industries.

"Too many of us are too well educated. As a result we can't get men to do necessary work. Out of 365 recently graduated from a public school, only one boy could be induced to learn a trade. We need the kind of education that puts jobs or trades on a par with the white collar situations. Our education is too lop-sided. Only a few years ago, when we started industrial education in Carnegie Tech Schools we had no text books for teaching brick-laying or sheet metal working and we had to construct them," declared Mr. Connelly.

Mr. Connelly, who was former labor commissioner of Pennsylvania, declared for more industrial education for boys, without detracting from the classical courses, and stressed that this is the time to improve the technique of tradesworkers by putting it upon a scientific basis.

Other speakers were professor J. S. Daugherty, Carnegie College of Industries, who spoke on Vocational Training; W. C. Markle on The Pittsburgh Plan of Vocational Training, which will be published later.

Louis Luckhardt, chairman of the laws committee, made report on by-laws.

W. C. Markle also reported on Trade Development.

Paul F. Brandstedt, chairman of the National Trade Development Committee, spoke on "Why an Association."

Thursday's Session.

The Thursday session was opened by Frank H. Phegley, Manager Research Bureau, Hart & Crouse Company, speaking on "Warm Air Heating."

W. D. McIlroy, of J. D. McIlroy & Sons, Pittsburgh, made an address and demonstration on "Overhead Expense."

Mr. McIlroy outlined the various items that must be included in "Overhead" and stated that from questionnaires sent out by the National Association it was shown that on an average yearly business of $30,000.00 the average overhead was $6,000.00 and that the average productive payroll was $10,000.00, and then proceeded to give the following demonstrations:

Basis of Demonstrations.

Gross business for year..$30,000.00
Overhead 6,000.00
Productive payroll (labor) 10,000.00
Percentage of overhead to productive payroll, 60 per cent.
Percentage of overhead to gross business, 20 per cent
Percentage of profit to gross business, 25 per cent.
Proportion of gross business to productive payroll, 3 to 1.

Demonstration No. 1.

Overhead calculated on labor (productive payroll):

Material (furnished).....	
Labor	50.00
Overhead (60 per cent on labor)	30.00
Profit (25 per cent on gross business)	26.67
	$106.67

Overhead calculated on gross business:

Material (furnished).....	
Labor .....$	50.00
Overhead (20 per cent on gross business)	18.18
Profit (25 per cent on gross business)	22.72
	$ 90.90

Demonstration No. 2.

An Average Job.

Overhead calculated on labor (productive payroll):

Material (galv. iron, etc.)..$	32.50
Labor	50.00
Overhead (60 per cent on labor)	30.00
Profit (25 per cent on labor)	37.50
	$150.00

Overhead calculated on gross business:

Material (galv. iron, etc.)..$	32.50
Labor	50.00
Overhead (20 per cent on gross business)	30.00
Profit (25 per cent on gross business)	37.50
	$150.00

Demonstration No. 3.

Overhead calculated on labor (productive payroll):

Material (copper, etc.)....$	195.00
Labor	50.00
Overhead (60 per cent on labor)	30.00
Profit (25 per cent on gross business)	91.67
	$366.67

Overhead calculated on gross business:

Material (copper, etc.)..$	195.00
Labor	50.00
Overhead (20 per cent on gross business)	89.09
Profit (25 per cent on gross business)	111.36
	$445.45

G. F. Stanton, manager of sales of the Baltimore Copper Smelting & Rolling Company, gave an address with moving pictures on the manufacture of sheet copper.

The outing held Thursday afternoon was attended by about 200.

Later a fine dinner and dance was enjoyed.

Election of Officers.

The officers of the association were re-elected by acclamation. They are:

President—D. E. Habercorn, Erie.

First Vice-President—Walter H. Tinney, Philadelphia.

Second Vice-President—George Heskey, Bethlehem.

Secretary—W. F. Angermyer, 714 Homewood Avenue, Pittsburgh.

Treasurer—G. C. Krack, Erie.

The directors elected for three years are: Louis Luckhardt, Pittsburgh; Joseph Urban, Reading; H. F. Bantham, Wilke-Barre; Charles L. Hahn, Allentown.

Resolutions.

It was resolved to inaugurate direct districting of the state and to hold district meetings, coöperating in every way with the auxiliary.

It was further resolved to appoint local apprentice committees.

It was further resolved to approve the 28-gauge and 2½-ounce coating galvanized iron for gutters as a minimum weight material to be used.

Special thanks were extended to the trade papers, the local press, the hotel and to the convention committee.

State Convention Committee.

Louis Luckhardt, Chairman; E. W. Scarborough, Secretary; W. H. Scholes, Samuel Meyers, I. J. Herbst.

Sub-Committees.

Hotel

W. F. Angermyer, Louis Luckhardt.

Program—W. F. Angermyer, Chairman; W. C. Markle, Louis Luckhardt.

Registration — W. J. Fortenbacher, Chairman; W. H. Scholes, D. E. Kendig, S. H. Meyers, John Graff.

Banquet and Outing—I. J. Herbst, Chairman; Edward Reismyer, E. W. Scarborough, Paul Meyers, W. J. Keist.

Ladies Entertainment—A. M. Hartzell, Chairman; Walter Papencordt, A. A. Scholze, S. N. Wilcox, J. O. Bihler, John Walker.

Hotel Attendance — Scott Morgan, Chairman; Chas. T. Gudekunst, Geo. P. Helt, Grant Nobbs.

Publicity—W. F. Angermyer, Chairman, E. W. Scarborough, Emil Limbach.

H. R. Richards Appointed Cleveland District Manager American Rolling Mill Company.

H. M. Richards has just recently been appointed district manager in charge of the Cleveland district office of the American Rolling Mill Company.

For a number of years he was located at the home offices of the company, and in recent years has been attached to the Pittsburgh district office.

J. T. Hagan of Cleveland is associated with Mr. Richards in his new work, and the office is now established at 1408 B. F. Keith Building, Cleveland.

New Home of Accurate Sheet Metal Works, Chicago, Completed and Occupied.

The Accurate Sheet Metal Works, Chicago, has erected a new and modern building at 2432 Milwaukee Avenue, Chicago, where it is now holding forth in readiness to supply the needs of its customers.

The new quarters contain both the offices and work shops of the company, with all the latest improved machinery and equipment.

R. H. Guenther is the proprietor of the Accurate Sheet Metal Works.

The Sheet Metal Contractors' Responsibility as a Buyer of Materials.

A part of the function of a sheet metal contractor is the skill of his organization in buying materials. With a proper organization, this matter of major importance to the owner is placed in responsible and experienced hands. Price alone is not the consideration of the successful sheet metal contractor, though he does and will sift for advantageous prices. The service, dependability, and adaptability of the materials and equipment purchased are major considerations.

The general idea for cheap or expensive materials to be put into a building depends on what kind of building the owner wants, and on how much he wants to spend. You can visit buildings which have been put up by general contractors and in which cheap equipment and materials have been used. You can turn from buildings of this class and find others put up by the same contractors in which only the best and most expensive materials have been used.

The sheet metal contractor, when acting as the purchasing agent, evidences his own particular skill, integrity, and responsibility in the intelligent buying of what is to go into his work on the building. It is a mistake to think that such a contractor can be sold on price alone. His moral obligation is to buy right and to buy well.

Here Is a Balance Sheet of a Useful Organization of Sheet Metal Contractors.

One of the members of the Roofing, Metal and Heating Engineers of Philadelphia, Incorporated, has compiled a "Statement of Assets and Liabilities," as he sees his association.

Let it be said here that the organization named is one of the comparatively few real live sheet metal and furnace mens' associations in the country.

The "Statement" follows:

Assets.

1. Twenty-five per cent of the premium of your compensation and liability insurance, at least, and 37½ per cent during 1921, from $100.00 to $200.00, according to your pay roll.

2. Meeting your competitors for a friendly comparison of business methods.

3. From the humblest source even the brightest of men can learn something new, and with the exception of a few minutes, the Association meeting has now resolved itself into a study hour.

4. At times even the best of us are getting stale and disgusted, and at the Association meetings we gain a new inspiration to start again the next day and do better and with a lighter heart.

5. The only place and time where plans are formed and put into effect for the general upbuilding of our business for the common good.

6. The business studies of the Association include:

Sheet metal work.

Roofing.

Warm air heating.

And within the Association ranks

we are fortunate in having men who are able to handle these three subjects, practically and theoretically, to the advantage of those present:

Overhead.

Bookkeeping.

Business Forms.

These lectures are well worth even the time of experienced men for the simple methods derived from them.

7. Collection Bureau. This bureau has successfully collected many old bills, and many hopelessly lost bills, that formerly were lost.

8. Credit Bureau. Facilities for furnishing information on the credit and financial standing of firms and individuals to whom you expect to extend credit.

9. Special rates to members on subscriptions to trade magazines, text books for the trade, standard forms, etc.

10. When you know the men in your business and learn what they are doing to advance your business, you gain a new faith in mankind and a happiness in taking part in constructive work.

Liabilities.

Dues yearly $24.00
Time given to meetings during one year.....30 hours

Are You Making Proper Depreciation Deductions?

Many errors are made in deducting depreciation for any purpose where this is done twice a year.

For instance, there is a difference between deducting 5 per cent for depreciation once or 2½ per cent in January and the other 2½ per cent in July. If it is desired to deduct 2½ per cent for depreciation twice a year, the percentage should be taken from the original amount both times.

As an example: We are allowed by the federal income tax law 5 per cent for depreciation on equipment amounting to $5,000. If we take 5 per cent of $5,000, our depreciation deduction will be $250. If, on the other hand, we take 2½ per cent off for depreciation in January, we will deduct $125 in January. Now, in order to make a proper deduction in July we must again take 2½ per cent of $5,000, and not 2½ per cent of $5,000—$125, or $4,875, as would ordinarily seem to be the proper amount.

Notes and Queries

Electric Ranges.

From Emrich Niczky, 436 West 42nd Street, New York City.

Please advise me who manufactures electric ranges.

Ans.—Michigan Stove Company, Adair and Jefferson Streets, Detroit, Michigan; Globe Stove and Range Company, Kokomo, Indiana, and Magee Furnace Company, Boston, Massachusetts.

"Wheeler" Stove Pipe Crimping Machine.

From J. C. Ziegler Manufacturing Company, Wichita Falls, Texas.

We should like to know who manufactures the "Wheeler" stove pipe crimping machine.

Ans.—W. A. Wheeler, Indianapolis, Indiana.

Rubber Tires for Baby Carriages.

From Louis Magin, 106 Rockton Avenue, Rockford, Illinois.

Please advise me where I can buy rubber tires and parts for putting the tires on baby carriages.

Ans.—Ogden Baby Carriage Shop, 3329 Ogden Avenue, and Chicago Baby Carriage Company, 414 North Morgan Street; both of Chicago, Illinois.

"Baxter" Furnace.

From George T. Gerhardt Company, 4405 Geary Street, San Francisco, California.

We should like to know who makes the "Baxter" furnace, as we want to buy repairs for it.

Ans.—F. A. Hull & Son, Danbury, Connecticut.

Copper and Brass Sand Screens.

From John C. Distler, 126 Lincolnway East, Mishawaka, Indiana.

Can you tell me who makes copper and brass wire screen, such as is used for sand screen?

Ans.—Fred J. Meyers Manufacturing Company, Hamilton, Ohio; Michigan Wire Goods Company, 2100 Howard Avenue, Detroit, Michigan; U. T. Hungerford Brass and Copper Company, New York city, and W. S. Tyler Company, Cleveland, Ohio.

"Arex" Ventilator.

From E. E. Philpott, 205 West Center Street, Warsaw, Indiana.

Will you kindly advise me who makes the "Arex" ventilator?

Ans.—The Arex Company, 111 West Washington Street, Chicago, Illinois.

Copper Shingles.

From C. L. Epps, Van Wert, Ohio.

Will you please inform me who manufactures copper shingles?

Ans.—Anaconda Copper Mining Company, 25 Broadway, New York city; Milwaukee Corrugating Company, Milwaukee, Wisconsin; C. G. Hussey and Company, 212 North Jefferson Street, Chicago, Illinois; Cortright Metal Roofing Company, Philadelphia, Pennsylvania, and W. J. Burton Company, Detroit, Michigan.

"New Standard" Lawn Mower.

From W. J. Bunn, 121 West Roosevelt Avenue, Beloit, Wisconsin.

Please inform me who manufactures the "New Standard" lawn mower.

Ans.—The F. and N. Lawn Mower Company, Richmond, Indiana.

Address of Parker-Kalon Corporation.

From H. M. Tover Company, 411 Pine Street, Port Huron, Michigan.

Will you please forward us the address of the P. K. Corporation of New York city, manufacturers of damper quadrants?

Ans.—This is the Parker-Kalon Corporation, 352-362 West Thirteenth Street, New York city.

Cedar Buckets.

From A. D. Barton, Mackinaw, Illinois.

Please tell me who makes cedar buckets.

Ans.—Richmond Cedar Works, Richmond, Virginia, and Pierpont Manufacturing Company, Savannah, Georgia.

Spanish Tile Roofing.

From Farrow and Muza, Oshkosh, Wisconsin.

Can you tell us who manufactures Spanish style tile roofing?

Ans.—Mound City Roofing Tile Company, 3301 Morganford Road, St. Louis, Missouri; Ludowici-Celadon Company, 104 South Michigan Avenue, Chicago, Illinois, and Valley Cornice and Slate Company, Limited, Saginaw, Michigan.

Where Dividers Are Used Effective Individual Displays Can Be Made In Large Windows.

Hennepin Hardware Company Makes Good Use of Manufacturers' Display Materials.

BY USING dividers in a large window, very effective individual displays can be had with little or no expense.

W. H. Owen has shown in the accompanying window display, which he made for the Hennepin Hardware Company, 909-913 Hennepin Avenue, Minneapolis, Minnesota, how the manufacturers' display materials can be used to a good advantage.

The section of the window shown in the display indicates to what extent some hardware dealers believe in the manufacturers' display helps.

Keen competition will sooner or later make every merchant bring into play every known device for suggesting products for his customers to buy. The art of selling lies in successful suggestions being made at a time when the patron would be in need of the articles displayed.

In the next window the firm has set aside space for a display of furniture and floor polish.

Electric heat reflectors and radio sets are seen in the upper portion of the main display.

Some merchants reserve a small part of their window, or a narrow display case to use on the sidewalk, for bargains.

The idea of a bargain window is to get people in the habit of watching them for daily leaders that are displayed. Bargain windows are never used for anything but exceptional values and people soon learn this.

A window of this sort is a great help to get rid of broken lines of goods, etc. Try it with some of your slow selling mechandise.

Adolph Stoffel, Lebanon, Dies After Long Illness.

Adolph Stoffel, for many years a leading hardware merchant in Lebanon, Illinois, died at his home recently, following an illness of many months. He was 55 years of age.

Twenty-six years ago Mr. Stoffel and his brother, Julius, established a hardware store in Lebanon under the name of Stoffel Brothers. Several years ago the brother with-

An Alemite Window Display Arranged by W. H. Owen for the Hennepin Hardware Company, 909-913 Hennepin, Avenue, Minneapolis, Minnesota.

drew from the firm to engage in a similar business enterprise at Mascoutah, but the firm name has remained unchanged.

Mr. Stoffel was a member of the Modern Woodmen of America for more than twenty-six years.

Besides his widow and children, he leaves six brothers: Louis and Julius of Mascoutah; Emil of East St. Louis; August and Gustav of Belleville, and Edward of Palmyra, Missouri, and two sisters, Mrs. Henry Ehret and Mrs. George Hurst of Belleville, and many relatives and friends.

There Are Big Profits Growing for You in Orchards and Gardens.

Opportunities for Heavy Sales of Enameled Ware Because of Preserving Time.

SUGAR is cheap!

We don't sell sugar," the hardware and housewares dealer may answer.

Yes, but you sell enameled ware kitchen utensils, cutlery, mason jars, jar rubbers and dozens of items used in canning and preserving.

The sugar trade is looking forward to a big preserving season this year because sugar prices have been crashing down through previous low records. The reason is there is an oversupply and, judging from the opinion of experts, there will probably be a surplus for some years to come.

All of which is good news for the housewife and for you.

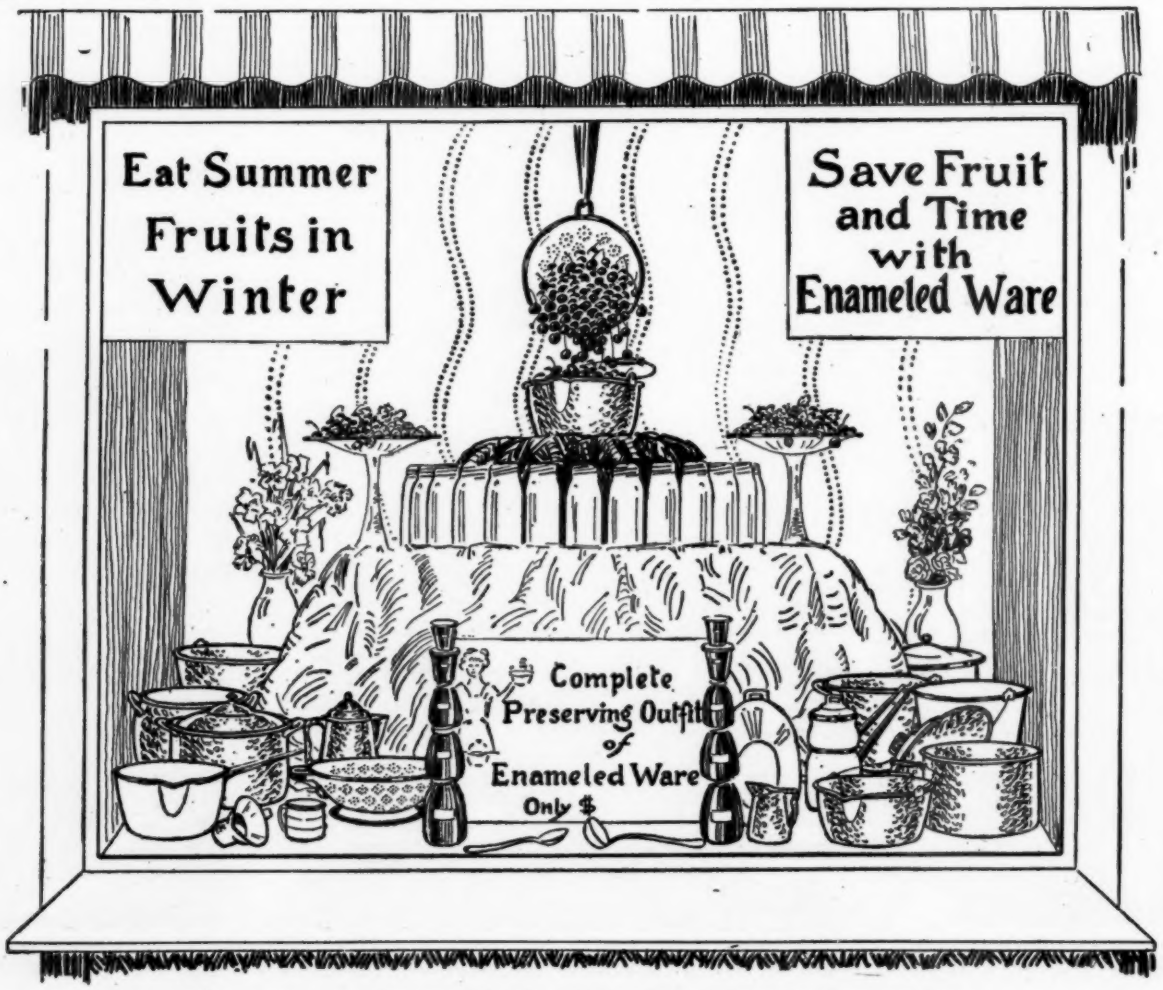
Is there any housewares or hardware dealer who hasn't realized the possibilities of preserving time as a big season?

Probably not. If there were any who did not catch on a few years ago or who have been holding back—surely the success of hundreds of stores all over the country has "sold" them the idea.

But—and there are more lost profits in "buts" than in almost any other factor—have all dealers organized all possible methods of cashing in on this big season?

Every year the merchandising leaders of the trade—and they will be found in small stores as well as large ones—develop new ways of "putting up" some nice profits when the housewife is "putting up" fruits and vegetables.

There is no reason any more for having to wait for inspiration in getting this preserving business. There are now enough good, sound, simple methods which have been proved right to make a strong campaign. All they need is organization and they are good year after year and should be put to work automatically every summer. Of course, new ideas won't hurt—and



Suggestions for Window Display of Enameled Ware for Canning Time.

the live dealer can always find some new slant in this preserving business to boost sales.

The preserving trade is limited by the number of women who plan to do any canning, some dealers say. That's the first error! The live ones will answer that the preserving trade is limited only by the number of housewives in your town or trading territory. It is up to you to encourage and persuade and stimulate all these women who were not planning to can to do so.

What do you do to sell electrical goods? You "sell" the housewife the idea of comfort and convenience. What do you do to sell paints? You "sell" the idea of brighter homes through a "clean-up and paint-up" campaign. What do you do to sell fishing rods, guns, baseball bats and camp equipment? You "sell" the "great outdoors."

The same principle will sell enameled ware and all the accessories for preserving. "Sell" the housewives in your town the good housekeeping and economy of preserving and the thought of the appetizing jams, jellies, and vegetables she can have in winter.

Therefore anything you can do to encourage preserving will increase your sales of equipment—and there are many things you can do at little or no expense. Go to your neighbor, the man who sells fruits and vegetables, and work out some coperatvie schemes with him. The grocer who sells sugar may also be glad to come in on the idea. You can "exchange" window displays—that is, you can each have in your window a basket of fruit, a bag of sugar and an enameled ware preserving kettle—and some jars of jelly. There would be appropriate signs next to each item reading: "This from Smith's Fruit Store + This from Brown's Grocery + This from the Jones Hardware Company = Will Assure You Plenty of These During the Winter."

Two groups of women in particular are likely to respond to general education on preserving who might not otherwise think of it. These are the newlyweds who very probably haven't the right utensils in their kitchen outfits and also the women whose husbands have been pottering about the garden during the spring. If you have not lists of these women, now is a good time to start them—and to make a note to have such lists every year. If you are located in a section where any fruit at all is grown, you will know from experience how much is wasted every year—and how much could be saved with the help of equipment you sell.

For the dealer who is not satisfied merely with having his customers come in to buy, but who is always thinking up new schemes to sell more customers and more to each customer, preserving equipment offers unusual possibilities. Take the idea of combinations or sets, for instance. The enameled ware utensils alone which are used in preserving make a fine range and can be combined into all sorts of sets at all sorts of prices. Add to these the accessories like jars of various shapes and sizes, rubber jar rings, jar lifters, jar wrenches, jar openers, racks, scales, strawberry hullers, pineapple eyers, paring knives, corers, squeezers, knives and wire goods and even the most ingenious dealer will have plenty of opportunity to use his cleverness.

A good way to feature these sets of enameled ware utensils is to give them catchy names. Here are a few suggestions:

"Thrift Enameled Ware Preserving Outfit."

Preserving kettle (medium size)
Colander
Ladle
Skimmer
Long spoon

"Save-the-Fruit Enameled Ware Preserving Outfit."

Same as previous combination, and add
Preserving kettle (large)
Pitcher (2-quart)
Fruit jar filler

"Jamboree Enameled Ware Preserving Outfit."

Same as previous combination, and add
Preserving kettle (small)
Bowl (large)
Ladles (2)
Skimmers (2)
Long spoons (2)

"All-Complete Enameled Ware Preserving Outfit."

Same as previous combination, and add
Rinsing pan
Measuring cup
Saucepans
Jar sterilizer (or "canner")
Dipper

Here are some "fruitful" suggestinos on encouraging preserving in your community and on tying up your store with any interest there is:

1. Remember that next to clothes and their friends' domestic difficulties, women are most interested in recipes. Let them have good recipes for canning and preserving. Put them in your advertising—print some up as envelope stuffers and circulars. You can get good ones from the Department of Agriculture bulletins, the current women's magazines and the farm papers. And a good idea is to keep these on file in your store and encourage your customers to read them and copy from them.

2. Join up in every way possible with such events as county fairs, canning clubs, boys' and girls' garden clubs, church affairs, etc.

3. Start a special list of the women who are known as the best cooks in town and who do a lot of canning. Send them special letters. You can get good names from newspapers, lists of club and church members, etc.

4. Contests are wonderful attractions. You can offer prizes for the best jars of jam and vegetables. Enameled ware preserving utensils are, of course, good prizes. You can have several different kinds of contests—one for newlyweds, one for clubwomen, one for school girls, etc.

5. Demonstrations are also great attention-getters. You can hold these in the store or in the window. For a few dollars a day you can probably hire a bright, neat-looking girl to "go through the motions" of canning and preserving—or, better still, have a competent person give actual demonstrations.

6. Help your customers by having your salespeople know something about preserving. Let them read up on recipes and know, for instance, that enameled ware should be used for preserving because its porcelain-like surface preserves the flavor and color of jams and also because it is easily cleaned. Let your salespeople talk about canning to every woman who comes in during the summer.

7. Remember that the preserving season lasts all through summer and well into October. Keep your eye on the fruit store and the gardens and see what fruits and vegetables are ready to put up. Play these up in your advertising and in your suggestions.

And don't forget the windows. Nothing can give your display man a better chance to show his skill and taste than a window on preserving. He has all the color, glow and mouth-watering attractiveness of fruits and vegetables! He can use vases of flowers to carry out the spirit of summer-time. And then there are jars and jars of different colored jams. And the porcelain-like enameled ware utensils. There are unlimited ways of combining these into striking displays. Put your utensils and accessories on the floor of the window—decorate the background with crepe paper with a floral design or sheets of wall paper. Put your jars on a box covered with another bright color of crepe paper. Show bowls of fruit and baskets of vegetables. Hang more fruits from the ceiling. A good scheme is to thread bunches of cherries on strings and hang them from a colander suspended from the ceiling. You can make a cornucopia of cardboard and fill it with fruits.

Serve by helping to preserve and you will get all the sales you deserve!

Repairs for "Pilot" Lawn Mower.

To American Artisan:

I should like to know who makes the "Pilot" lawn mower, as I am in the market for repairs for it.

A. D. Barton.

New York State Retail Hardware Association Pays Final Tribute to John Giles Ferres, Who Died July 4, 1924.

The New York State Retail Hardware Association recently distributed a memorial containing a beautiful tribute to the work of John Giles Ferres, a charter member of the association who died July 4, 1924, after an active life of four score years.

Mr. Ferres was born in New York city, July 19, 1844, and was educated in that city. In 1863 he moved to Johnstown and shortly after entered the hardware business, buying with John Dewey an establishment founded in 1857 by the latter's father, whose daughter had shortly before become Mrs. Ferres. This partnership was dissolved in 1870; Mr. Ferres conducting the store alone until 1909 in which year it was incorporated as John G. Ferres Hardware Company. Since its inception the business has been located at the original address, 118 West Main Street.

In addition to his private business, Mr. Ferres was president of the Bank of Johnstown, the Johnstown Knitting Company, and a director or officer in several public service corporations. For many years he served his city in its educational and other departments besides being for more than fifty years active in Masonic circles and in the Episcopal Church of his home city.

He is survived by two daughters, Mrs. A. M. Gregory and Miss Florence Ferres and one grandson, John G. Ferres, 2nd.

Coming Conventions

Wisconsin Sheet Metal Contractors' Association Outing, Milwaukee, August 21, 1924. Paul L. Biersach, 661 Hubbard Street, or R. E. Kelm, 367 Third Street, Milwaukee.

Kentucky Hardware and Implement Association Convention, Jefferson County Armory, Louisville, week of January 18, 1925. J. M. Stone, Secretary-Treasurer, 200 Republic Building, Louisville.

Western Retail Implement and Hardware Association Convention, Kansas City, Missouri, January 13, 14, 15, 1925. H. J. Hodge, Secretary, Abilene, Kansas.

Texas Hardware and Implement Association Convention, Dallas, Texas, January 20, 21, 22, 1925. Dan Scoates, Secretary-Treasurer, College Station.

Oklahoma Hardware and Implement Association Convention, Masonic Temple, Oklahoma City, February 3, 4, 5, 1925. Charles L. Unger, Secretary-Treasurer, Oklahoma City.

Nebraska Retail Hardware Association Convention and Exhibition, Omaha, February 3, 4, 5, 6, 1925. Convention headquarters, Rome Hotel. Exhibition, City Auditorium. George H. Dietz, Secretary, 414-419 Little Building, Lincoln.

Wisconsin Retail Hardware Association Convention and Exhibition, Auditorium, Milwaukee, February 4, 5, 6, 1925. P. J. Jacobs, Secretary-Treasurer, Stevens Point.

Retail Hardware Doings

Alabama.

Hicks and Henderson have purchased the Tullis Hardware store at 36 Commerce Street, Montgomery.

Arkansas.

W. R. Richey of Charleston and H. E. Richey of Ratcliff, owners of the Richey Brothers Hardware stores at those places, together with the Johns Company of Paris, have purchased the Young Hardware Company's stock at Paris. The owners now are operating the business under the name of the Richey-John Hardware Company of Paris.

California.

Ryan and Aspinwald, a hardware firm, has rented the front part of Brown's grocery store, Highway and Santa Cruz Avenue, Palo Alto, and will use it as a hardware salesroom.

Illinois.

William Edwards and Sons have opened a hardware store at 372 Hazel Avenue, Glencoe.

W. H. Snapp has sold his hardware stock at Findlay to T. H. Crowder of Bethany.

Iowa.

Robert F. Hicks of Muscatine has purchased the L. B. Lee Hardware stock of goods at Letts, and will operate the store with the assistance of Ulrie Garrett.

Kansas.

C. J. Achning, who for forty-five years has operated a hardware store at 822 Massachusetts Street, Lawrence, is going to retire from his activities as a hardware merchant.

Michigan.

The Torch Lake Hardware Store has been opened in the Toupin Building, Houghton, by John Miller.

Ohio.

R. B. Fairley of Hillsboro, well-known hardware man of that city, has purchased the store and business of the Circleville Hardware Company at Circleville.

A deal has been completed whereby Lee Rahrig of Edon became the owner of the Ray Hillard hardware store at Paulding.

Texas.

W. A. Brady has opened a hardware store at Temple.

Alvy R. Couch has purchased one-third interest in the McCollum-Ellis hardware store at Hasekell.

C. W. Watts and H. F. Olsen have purchased the Hines Hardware store at El Paso.

Small Town Stove Merchant Successfully Combats Mail Order Stove Selling Competition.

Invites Comparison Between Stoves Illustrated In Mail Order Catalog and Those On Display In His Store.

IN THE retail stove business, foresight is one of the great essentials. Thus, while the weather is too hot for the general public to show much interest in anything, the hardware dealer is busy planning for fall trade. In that trade the stove business will prove a considerable factor.

One of the chief complaints of some dealers in this connection is that the mail order houses are dangerous competitors, particularly for rural trade.

In this connection one small town dealer some years ago who seemed to welcome the advent of the mail order catalog to his community and the consequent tendency of his stove prospects to compare his prices with those quoted by the mail order houses.

"I always like to see a customer looking around and enquiring for prices," he said. "It means that he must be much interested in the article in question; and that he is pretty sure to buy, somewhere. The dealer who has the best proposition to offer him and puts it up in the best way will get the order, be he hardware dealer or mail order man."

How the Merchant Talked to the Customer.

As I recollect, the process was somewhat like this. A customer dropped into the store and enquired the price of a coal parlor heater, with oven. The stove this merchant featured, in this line, retailed at that time for $44, although both mail order and retail prices have gone up somewhat since then.

When $44 was quoted, the customer would raise his eyebrows, in surprise. "Why, that same stove is shown in Blank's catalog at $27.50."

"What does Blank's stove weigh?" enquired the merchant.

"The catalog says it weighs 350 pounds."

"Then let me show you that the coal stove I am offering you is as cheap and of much better quality, weight for weight, than the one which the catalog offers for $27.50.

"Here are the figures. The catalog stove, weighing 350 pounds, at $27.50, costs 7.9—practically 8 cents—a pound. My stove is $44, weighs 555 pounds, or almost exactly the same price per pound. Now, you know as well as I do that the heavier stove has the advantage in the kind of service it gives you. To begin with, it holds the heat much longer, and will therefore warm a room more uniformly than a lightweight stove, without keeping it going at full capacity all the time.

Stressing Durability.

"Another advantage is durability. My stove, I am pretty sure, will many times outlast two of these cheap stoves. Over 20 years ago, I installed one of these identical stoves in the parsonage, and for all I can see, it is still as good as new and has only cost 25 cents for repairs. Can you imagine that cheap catalog stove making as good a record?

"You must consider that there have been many different occupants in the parsonage during those 20 years, and while all have used the stove, none of them have had any particular interest in taking special care of it, because the parsonage was built and furnished by the congregation. Now, here you get the latest model, involving the same substantial principles of service and durability—and if you buy it, I'll set it up in your home, start it going, and guarantee it to work satisfactorily."

Along that line, with variations to meet individual cases, this particular small town stove merchant carried on very effective warfare against mail order competition.

The mail order houses are pretty sure to get some business, at all times. Like the poor of Scripture, they will be always with us. But it is a competition to be seriously feared only where the local merchants are lacking in enterprise methods. Brisk attention to the trade on the part of local dealers will in most instances effectively counteract the mail order menace.

Well Known Stove Company Changes Name to Correspond with Name of Products.

The following announcement is made by the Weir Stove Company, manufacturing the well known Glenwood stove, ranges and furnaces:

"After careful consideration, the stockholders and directors of this company have decided that it is advisable to change the name from Weir Stove Company to Glenwood Range Company.

"The name 'Glenwood' has had nation-wide publicity, and we believe that our prestige will be greatly increased in our advertising, as well as by our correspondence and other communications

"The ownership, management, and policy of the company remain unchanged.

"It is our desire to continue with the same courtesies and treatment which you have received in the past."

The officers of the Glenwood Range Company are:

Joseph L. Anthony, President.

Robert M. Leach, Treasurer.

Merle E. Abbott, General Sales and Advertising Manager.

Both Mr. Anthony and Mr. Leach have long been prominent in the affairs of the National Association of Stove Manufacturers, Mr. Leach having served two terms as its President and now serving on the Executive Committee.

Federal Trade Commission Issues Cease - and - Desist Order on Pittsburgh Plus.

Sentiment In Non-Ferrous Metal Market Bullish As Foreign Outlook Improves—Prices Climb.

RECENT developments affecting the American farmer and Europe and conditions have been of outstanding importance. They may prove to be the forces required to give real impetus to any trade improvement that may be near at hand.

American interest in European settlement is enormous. The Dawes plan bears the name of an American. An American may be named "agent general" to direct the plan, and American investors will be asked to supply the bulk of the $200,000,000 German loan.

Some observers fear European competition for American goods. That is a danger not nearly so disturbing as a Europe perpetually on the verge of economic collapse. Moreover, American food, credit, raw materials and implements will be needed abroad for some time.

The agricultural outlook holds much encouragement. At their recent high points wheat had advanced 34 cents a bushel and corn 40 cents from the year's lows. Speculation based on short crop prospects in many countries explains the advance.

Better prices, if held through harvests, will greatly augment farmer buying power. At current values the prospective cash return for reduced crops indicates an increase of $350,000,000 or about 10 per cent over that for the bumper 1923 yields.

Copper.

Copper prices advanced July 21 to 12.62½ cents to 12.75 cents, delivered, a rise of ⅜ cent to ½ cent from recent levels. This rise in Electrolytic has been accompanied by similar strength in all the lines based on Electrolytic, including lake and casting copper and all secondary descriptions.

The statistical position of the copper market has been excellent in spite of the dull domestic general trade, copper stocks having undergone a reduction of about 88,000,000 pounds since January 1.

In view of this condition, the possibility of further enhanced demand resulting from economic stability in Europe and improved business here has livened the copper market.

Chicago prices on copper sheets is 18⅞ cents. Mill base is 18⅛ cents.

Tin.

Tin prices rose about 3 cents a pound in New York between July 15 and July 21. London quotations advanced £9 on July 21, resulting in a 2-cent rise here.

Simultaneously, sterling exchange rates also have risen sharply to about $4.39, further increasing import costs.

The prospects for important results at the allied conference in London have encouraged important operators to adopt a bullish policy and speculation in the London market has involved a heavy tonnage of paper tin.

Solder.

Chicago warehouse prices on solder are as follows: Warranted, 50-50, $30.50; Commercial, 45-55, $29.75, and Plumbers', $28.75, all per 100 pounds.

Zinc.

Zinc has been in active demand for export.

Sales have involved several thousand tons the past few weeks and recently domestic demand has expanded.

The excellent bookings by British galvanizers for export have filled some mills up to October and these mills have been buying American zinc to cover their coming needs.

The price of prime western has begun to rise, selling at 5.90 cents, East St. Louis, Monday, for July-August shipment, as against 5.85 cents, the pegged price of the two preceding weeks.

Lead.

Lead was in more active demand July 21 than on any day in months. Both eastern and middle western consumers entered the market, inquiring for many thousand tons, principally for August and September shipment.

Prices have advanced from the recent low of 6.65 cents, East St. Louis, to 6.80 cents, St. Louis, as of July 21.

In the east, independent sellers have been quoting above the American Smelting & Refining Company's contract price of 7 cents, New York, asking 7.10 cents to 7.15 cents, New York, foreign demand for lead has been extremely heavy.

Wire and Nails.

Due partially to the recent reduction in quotations, wire and wire products demand at Chicago has improved notably and makers believe even greater improvement is in sight.

Jobbers not only are buying for current requirements, but a little farther ahead.

Manufacturing lines also are in better demand. Coal mines are taking more electrical wire and similar products. Stocks are so large that an increase in production is not yet warranted.

Local makers are quoting 2.60 cents to 2.65 cents, Pittsburgh, on plain wire and 2.85 cents to 2.90 cents on wire nails.

Bolts and Nuts.

One or two nut and bolt manufacturers have withdrawn all quotations and the trade believes this is a step toward more stabilized conditions.

Kansas City Athletic Club
Architects: Hoit, Price & Barnes Contractors: Kornbrodt Kornice Co.
All sheet metal work is galvanized ARMCO-Ingot Iron

The Sheet Metal is ARMCO - Ingot Iron

ARMCO - Ingot Iron is used for

Conductor Pipes
Doors and Partitions
Drain Outlets
Elbows
Furnaces
Garbage Cans and Incinerators
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Various discounts have been quoted and each inquiry apparently was considered on its own merits. Some manufacturers still quote officially 60 and 20 off on large machine bolts, with other prices in harmony.

This sort of buying is also true of rivets, although less-than-carload lots have been particularly numerous. A few single carloads this week brought 2.50 cents, base Pittsburgh. Small rivets usually are quoted at 70 and 10 off list.

Tin Plate.

Further progress has been made in the discharge of tin plate obligations, without a commensurate increase in new bookings.

New business is still limited, although specifications on contracts continue to come in every day or so.

Governmental reports on vegetable crops, however, are encouraging and point to more tin plate buying being done soon. These states that more acreage has been devoted to peas and beans than in 1923 and estimates of the yield are correspondingly high.

This is encouraging to the tin plate manufacturer and while so far it has not been possible to increase operating schedules and the average is still below 60 per cent, real betterment is expected before fall.

The corn and tomato packs both are now expected to be larger than heretofore believed. The price on production tin plate still unchanged at $5.50 per base box, 100 pounds, Pittsburgh.

Sheets.

Demand for sheets has been picking up just a trifle, enough to show at least that it is not decreasing. By long range comparisons, of tonnages, the demand does not look as poor as it does when expressed in percentages of capacity, the capacity being so large.

The only quotable change in prices is in galvanized sheets, which have sold to such an extent at 4.60 cents in the past week that we now quote the market range at 4.60 cents to 4.80 cents, against 4.70 cents to 4.80 cents hitherto quoted. However, this is not the first appearance of a 4.60-cent price, there having been occasional instances of that price being done for a long time past.

Sheet prices are a matter of competition, rather than a matter of the volume of demand. Of the four descriptions, blue annealed, black, galvanized and automobile sheets, demand for galvanized has been the best for many weeks past, and it is in galvanized alone that we now report a decline in the quotable market.

Sheet making capacity is very large, too large according to all the figures of production and operating rates in past years. By capacity being so large, operations when expressed in percentage look small. The case appears somewhat differently when the present 35 per cent rate is reduced to tonnage and the tonnage compared with outputs in previous years.

Old Metals.

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, $16.75 to $17.25; old iron axles, $23.50 to $24.00; steel springs, $18.50 to $19.00; No. 1 wrought iron, $13.00 to $13.50; No. 1 cast, $16.00 to $16.50, all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 8 cents; light brass, 5 cents; lead, 5 cents; zinc, 3¼ cents, and cast aluminum, 14½ cents.

Pig Iron Again in Doldrums With Inquiries Few and Sales Small—Trend Up.

Prices Steadier — Producers Not Inclined to Make Concessions—Foundries Taking increased Shipments.

SOME firming tendency of prices which has been featured the past two weeks at certain trading centers by advances asked by sellers, suggests the question whether the pig iron market is at the termination of its long period of decline. If the turn of the market in reality has been made finally, as various signs now indicate, it means the end of at least twelve months of falling prices, subject to one temporary modification.

Retrospective examination of pig iron prices running back from the present day brings out some interesting facts. Beginning a rise in December, 1923, the market advanced continuously for four months until April of that year. From that point there was a steady decline for seven months until December.

In March a recession again overtook the market. From March until the present time the decline has been $4 to $5 a ton in practically all districts except the east, where it has amounted to about $2 to $2.50 per ton.

Therefore, in the last eighteen months the pig iron market has experienced two rising swells and two severe falls. This condition has brought merchant iron production to the lowest point since October, 1922, and to a point substantially 40 per cent below that of the high production period of April-June, 1923.

Pig iron prices at bottom, however, necessarily do not mean any considerable turn in the opposite direction. The volume of future buying as well as the extent of continuing production will determine that. In fact, beyond some natural reaction, the facts do not presage any considerable upturn of the market. Stocks of iron in the hands of merchant producers are the largest in years if not the largest in history. Consumption of merchant iron as revealed by shipments has fallen so far that it remains even below the attenuated production. The pig iron market, therefore, may have turned the corner, but there is not much prospect for its enjoying an extensive or immediate price recovery.